

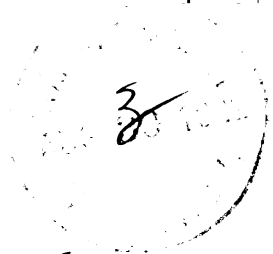
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HIGH SCHOOLS AND SEX
EDUCATION

1922

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TREASURY DEPARTMENT
UNITED STATES PUBLIC HEALTH SERVICE

High Schools and Sex Education

A Manual of
*Suggestions on Education
Related to Sex*

PREPARED UNDER THE DIRECTION OF
THE SURGEON GENERAL, UNITED STATES PUBLIC HEALTH SERVICE
IN COLLABORATION WITH
THE UNITED STATES BUREAU OF EDUCATION

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FOREWORD.

The importance of education along the lines of what is sometimes called "social hygiene" has long been evident to all those interested in the welfare of boys and girls. It was the war, however, that revealed the immediate urgency of this work. Now as before it is essential, both for preventing the destructive venereal diseases and for insuring the best use of their creative impulses, that our boys and girls be wisely directed to an understanding and control of their sexual energies.

The present book brings together in usable form a variety of material. It has been prepared on the basis of descriptions of work actually being done by high-school teachers in various parts of the country, replies to questions submitted to the Bureau of Education and to the Public Health Service by correspondents, and replies to questions most frequently raised at the forty or more conferences on sex education that have been held during the past three years. There is included an attempt to show the bearing of the whole problem of sex enlightenment and adjustment to the other tasks of the school, together with a variety of practical suggestions derived from many sources.

We hope that this publication will be of substantial assistance to those high-school teachers and principals who are earnestly striving to make our boys and girls into more effective, more useful citizens, and that through the practical application of the methods which it submits it will contribute to the rearing of a healthier and happier generation.

JOHN J. TIGERT,
Commissioner of Education,
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HUGH S. CUMMING,
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PREFACE AND ACKNOWLEDGMENTS.

The preparation of this manual was first undertaken by Mr. Edgar F. Van Buskirk, at that time assistant director of educational work in the Public Health Service, under the direction of the Surgeon General, and with the cooperation of an editorial committee consisting of Dr. W. S. Small, specialist in school hygiene of the Bureau of Education, Asst. Surg. Gen. C. C. Pierce, and Mr. H. H. Moore, director of educational work in the Division of Venereal Diseases, Public Health Service. The first draft was based to a large extent on a number of papers prepared by various participants in the series of educational conferences held in different parts of the country during 1919 and 1920.

Several copies of this draft were distributed among educators and specialists who were kind enough to give their criticisms and suggestions. The whole manual was subsequently rewritten and again criticized before final revision. The men and women named below have been of special assistance to the Bureau of Education and the Public Health Service in forwarding this project, and appreciation of their generous aid is hereby acknowledged.

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MANUAL OF SUGGESTIONS ON EDUCATION RELATED TO SEX.

INTRODUCTION.

1. Development of the school's responsibility.—Various social and educational developments of the past 15 to 20 years have conspired to force upon the high schools of the country a definite responsibility with relation to what has been vaguely termed "sex education."

On the social side, it has become increasingly evident that boys and girls are growing into maturity not alone ignorant of the basic facts and the meaning of sex but with more or less seriously distorted or perverted attitudes toward sex. The large sections of our population characterized by a vulgar or by a prudish attitude, the prevalence of prostitution, the increase in the rates of illegitimate births, of desertions and of divorces, the apparent increase of certain types of mental disturbance, and the wide distribution of venereal diseases and other morbid phenomena may be considered as symptoms of a defective adjustment of boys and girls to the living problems and conditions of men and women. While most, or perhaps all, of these social symptoms indicate economic and other factors that are not adjusted, they also point unmistakably to a serious defect in the "bringing up"—that is, the education—of men and women.

On the educational side, it has become increasingly clear that the mere imparting of knowledge, however useful, or mere "mental discipline," however severe, is far from an adequate equipment for the important tasks of life. The new demands upon the school for character training, for vocational guidance and training, for citizenship training are but further indications of a widespread and growing realization of the incompleteness of our educational plans and programs.

2. Definition of sex education.—In harmony with the rapidly developing psychology of education, it becomes necessary to conceive of education in relation to sex as but a phase of character education as a whole. As such, "sex education" means vastly more than instruction concerning sex; it means a comprehensive and progressive process of care, guidance, and example extending over a long period of years, from infancy to maturity. Moreover, sex education is a social and a socializing process; both in its progress and in its

results it reaches far beyond the boundaries of the physical person. Because of the far-reaching effects of the eventual attitude and practices of the individual, sex education carries with it obligations of the widest social importance. As a phase of character formation, sex education must include all the instruction and training that may help to form normal and wholesome attitudes and ideals in relation to sex, and to shape conduct in accord with such attitudes and ideals. Such education must, therefore, be developed as an organic part of the entire educational program, and not be considered a special and isolated bit of ritual to be performed at a given time, and then dismissed as finished.

3. Home and school.—The home naturally suggests itself as the proper agency for giving young people, whether through example or precept, such information and guidance as they should receive regarding the meaning and place of sex in life. Yet the very facts that arouse the public to the need for such education themselves indicate the home's inability to carry on this work alone. In the wake of the industrial revolution, the family has lost many of its educational and recreational functions as well as most of its economic functions. Hand in hand with these changes, the school has taken over more and more of the former. This is illustrated by the school's teaching the children what to eat and how, the elements of manners and morals, the use of simple hand tools, sewing and house furnishing, and hundreds of other details of life that children formerly picked up through their mere presence in a domestic environment that carried on all the basic social processes. The time seems to have arrived when the school, in addition to teaching girls something of the machinery and management of households, must teach both boys and girls something of the meaning and the conduct of homes.

In discussing the functions, responsibilities, and opportunities of the school and the home it is of course not intended to represent these as in any sense mutually exclusive. The school, as the community's chief official agency for the training of citizens, is related to the home as a parallel institution working to the same end. We are not to think of these agencies as in any sense rivals, competing for the time or attention of the children or seeking to influence the rising generation toward conflicting ends. The various institutions accepted by the community as agents for molding our youth must be conceived not only as complementary to each other but also as having direct mutual relations in the joint task. Thus the school must be of direct help to the home, dealing with the individual parents as well as with parent-teacher associations; and so, too, the home must do its definite share in making the work of the school effective.

In emphasizing the responsibility of the school, therefore, the intention is to enlarge the opportunity of the child and not to take anything from the home.

Whatever the reasons for the failure of so many homes in the past, we shall probably not bring up a generation of better home makers except through educational procedure directly bearing upon home making; and for any comprehensive and systematic educational work we must depend upon our schools and our teachers. That teachers are aware of a growing responsibility in this field is shown by the resolutions adopted by the National Education Association at its annual convention in Salt Lake City, July, 1920:

As effective health education is essential to the conservation of the child, who is the most important asset of the Nation, we favor definite plans for physical training to be carried on regularly in every school of the Nation; we indorse the making of good-health practices a part of the daily life of the child; we recommend some such system as the modern health crusade as a part of an effective course of health education; we favor the teaching of social hygiene in all teacher-training institutions, and recommend the cooperation of teachers with all organizations of parents in the instruction necessary to the inculcation of sound ideas and attitudes in children and youth. As to the essentials of social hygiene, we favor the establishment by the States and the Nation of definite standards and ideals of physical perfection of children of school age, to be placed before pupils and parents, and we advise the adoption of a plan of regular reports to parents of the physical standing of their children, to the end that every American child may build his life on a basis of sound physical health.

4. Why the high school?—It is recognized by those who have studied the matter that the child receives suggestions and information that help determine his later attitudes toward sex long before he reaches high-school age. But if we think of sex education as a continuous process of guidance and adjustment, there remains much to be done during the high-school period and even beyond. There are, moreover, certain special considerations:

(1) From the viewpoint of a progressive society, the high school represents a critical point in schooling because its pupils are to become the leaders of the next generation. Whatever the school does or fails to do, these are the boys and girls who will be the influential members of the community 20 to 40 years hence.

(2) School methods are still applicable to these boys and girls, whereas they are of diminishing effect with others of the same age who are already out of school.

(3) The pupils now in the high school are for but a brief period under the influence of the school, for nearly half the pupils drop out every year.

(4) The interests of the adolescent are such as to make him particularly susceptible to every suggestion, every bit of information, every bit of guidance that bears on sex.

(5) And finally, just because practically all boys and girls come to high school with a considerable body of information and a certain attitude toward sex already acquired, it becomes of the utmost importance that this information be made straight, and that the attitudes be made clean and sound.

5. Purpose of the manual.—However urgent the task of education with respect to sex may be, it is recognized that the schools, as a whole, are not prepared to handle it. Although here and there throughout the country individual teachers and groups of teachers have experimented with the problem, the teaching body as a whole is not equipped for the task through training or experience. There are, however, thousands of teachers in our high schools who are in a position to profit from the studies and experiences of others, and who are eager to give to their own pupils every possible aid in making the needed adjustments to the intellectual and personal problems of sex. It is for the purpose of bringing together the observations and experiences of one group of teachers in order to aid the other group that this manual has been prepared.

It is not expected that the indifferent or mediocre teacher will be transformed by the study of this manual into an enthusiastic guide of youth in this most difficult field. It is expected only that the earnest and capable teacher who already has the will may be helped to find the way.

PART I.

GENERAL ASPECTS.

CHAPTER I.

SEX EDUCATION IN THE HIGH SCHOOL.

1. Devitalized education.—The high-school curricula of the country show evidence of a purpose to give the adolescent a thorough preparation for efficient living on a high human plane. In addition to the so-called tools of intellectual workmanship and human intercourse there is offered to youth a wide range of subjects that suggest at least the whole range of usable race experience, to serve as inspiration and guide for further growth. Literature, history, and social sciences occupy a leading place. Foreign language is justified quite as frequently for its relation to literature and life as it is for its possible value in foreign trade or travel. The sciences are taught because boys and girls should have at least a bowing acquaintance with the distinctive thoughts and methods of modern life. Practical arts appear in a variety of forms, largely, it is true, with an increasing vocational bias, but still to a notable extent, especially for girls, from the viewpoint of an eventual application in the making and management of homes. Systematic physical training for the promotion of organic vigor and the development of social and civic virtues is becoming almost universal.

Yet an examination of the actual content of the subjects as taught reveals in most cases a nearly complete elimination of the facts of sex, of allusions to sex, of the implications of sex. All the subjects of the curriculum have to do with life, each in a partial way. Yet the interest and the curiosity of young people are never completely satisfied, some of their vital needs are never met, because each subject stops short just before the critical point is reached—that is, the problem of sex. Moreover, seldom does the pupil find in his school experience a synthesis, a unification of the various “ologies” and doctrines and lessons into a living whole, related on all sides to the very things that are of deepest concern. We teach all around life, but leave it to the boys and girls to discover for themselves the central facts of life, to make for themselves their own charts in a perilous sea, or drift helplessly at the mercy of every breeze and current.

2. The child and the school.—Long before school age the child normally discovers the existence of the two sexes among human beings, the more obvious anatomical differences between them, as well as something of the emotional and social differences between them. In the home the child first becomes conscious of curiosity regarding the origin of living things, and should there have his curiosity satisfied. In the home, too, the child should find more or less explicit guidance in the formation of ideals bearing on sex relationships and in the establishment of habits of self-control.

Unfortunately, however, we must face the fact that for reasons beyond the control of the parents of to-day the vast majority of homes do not meet the child's needs. The forces at work impose upon the child from earliest infancy false conceptions and distorted attitudes regarding sex, and against the prevailing social taboo even the more intelligent parents are not able to contend with complete success in the training of their own children. Among 948 college men investigated,¹ only some 23 per cent received any sex instruction from their parents; and two-thirds of all instruction from responsible sources for this group came after the age of 15 years, or nearly six years later than the average age at which the boys have already received their first lasting sex impressions. That the conditions of the boys and girls in those groups which never get to college is much worse can be readily seen. Though there is evidence that an increasing number of homes is giving attention to these problems, it is also clear that if education with respect to sex were left solely to parents comparatively few children would in this particular be adequately prepared for life. Moreover, if parents of our next generation are ever to meet their task adequately they must be prepared for it while they are under the tutelage of the school; that is to say, the school has a definite task to perform in training the children of to-day to be the parents of to-morrow.

3. Other educative agencies.—Even if all parents were doing their part effectively, other agencies would still be under obligation to participate. Sex has not in life the place of an isolated experience or of an isolated group of facts. It winds through many kinds of experience at different ages and it is a part of many kinds of facts. The child meets its manifestations in nature and in art, in the conventions of social life, in a hundred details of the daily routine. If the child is to be enlightened, if he is to be effectively oriented, it follows that all institutions and activities which are concerned with life must contribute to his understanding of the place and meaning of sex in life. The church in its ethical and religious teachings, the theater in its portrayal of will and destiny, literature in its accounts of human

¹ Problems and Principles of Sex Education, by Dr. Max J. Ezner, New York. Association Press, 1915.

activities and emotions, and the school, not alone in its didactic instruction, but also in its extra-curricular activities—all these agencies have a definite part to play in sex education.

4. The school's unique position.—In this many-sided molding of the individual's character the rôle of the school can be made in many ways distinctive and influential. On the side of knowledge the school can supplement what other agencies furnish and in many cases can both correct the child's misinformation and open up new lines of information not accessible to him through other channels. On the side of interpretation the school is in a unique position to unify all the child's thoughts and experiences, since it may take cognizance of all the "departments" of life as well as of "education," and since it may speak authoritatively from the viewpoint of the public—that is, of our *common* interests and needs, unaffected by partisan or sectarian bias. On the side of needed activities—for in character as in art the child learns to do by doing—the school can make available every type of relationship through its control of work and play, of study and recreation, and through its ability to command groups of varying size and composition. The school is thus in a position to create those attitudes and habits of behavior which are an essential part of the individual's adjustment to the sex factor in life.

5. The handicaps of the school.—The opportunity, and accordingly the responsibility, of the school exists notwithstanding certain obvious limitations and shortcomings. Most school-teachers have suffered in common with their contemporaries from the historic taboo upon the subject of sex and from the corresponding repressions, misunderstandings, and aversions. Most school-teachers are comparatively young unmarried women who have neither by study nor experience overcome the general disabilities. The work of the school is planned with rather definitely prescribed material and methods, leaving apparently little discretion to the individual teacher. The time of the school is limited and apt to be already crowded with rather more "essentials" than can be satisfactorily managed. The pupils come to the teacher in groups showing wide variation in native capacity in background and in relative maturity. These facts constitute serious obstacles to the introduction of "sex education" as a new task. Yet, difficult as such instruction undoubtedly may be, it is not as formidable as at first sight it appears.

6. The advantages of the school.—Teachers as a class, partly because of their training and partly because of their relative youthfulness, are in a better position to learn anew the important biological and psychological facts which they need in common with parents and with adults generally. As a group, teachers are more readily

mobilized for supplementary training than any other adult group in the community with the possible exception of the Army or Navy. The subject matter and the viewpoints essential to equip teachers for sex education are precisely what people need for personal adjustment and well being, so that the acquisition of this new training does not involve an additional burden. So far as the time and the program of the school are concerned, sex education does not mean the addition of new subjects to the curriculum but a more candid treatment of subjects and a more constructive use of activities that are already accepted as normal parts of the school's service to its pupils. Assuming that teachers are equipped, whether through professional preparation or as a result of supplementary training, sex education in the school means the presenting of facts, the interpretation of meanings and applications, where they happen to fit in with the subject matter of instruction in all the various school courses or subjects that deal with human interests, human relations, human problems. And it means inspiration and guidance in the formation of wholesome attitudes through daily experience in wholesome living. All this can be accomplished without at any point making the pupil aware that something out of the ordinary is happening and without placing upon the ideas of sex an undue emphasis. Moreover, particular facts and ideas and activities may thus be put before the pupil at the time in his life when they are most needed, anticipating temptations by the knowledge and ideals necessary for protection.

7. The task of the high school.—The school has come to be regarded by most of us as a “teaching” institution, so that every new problem is likely to present itself as one of subject matter, or of the imparting of information. But it is more profitable to consider first the peculiar nature of the adolescent, and secondly, as to aims, the results sought in action or character. It is desired, then, that our boys and girls grow into men and women who have so far mastered their impulses as to have them under direction for the service of their acknowledged purposes. Instead of being either prurient or prudish, they should have learned to keep sex in its place, without obtruding it and without destroying it. We want them to have a sincere and active regard for the rights of others in their sex relations just as in their economic, or social, or political relations. We want them to have high ideals of personal responsibility—not merely with respect to property or contracts for goods and services, but also with respect to personal relations and especially with respect to the race. We want them to have high standards of human values and high aspirations for human achievement, including their own.

These rather vague objectives come, however, not from the study of texts for the purpose of "learning" the lessons; they are rather the by-product, under certain conditions, of reflection upon life problems, inspired by strong and sympathetic personalities. If the school is to accomplish these results, such personalities must be available, and they must assist boys and girls with opportunities for discovering, discussing, and reflecting upon questions of responsibility, and self-control and life values, the big problems of adjustment and achievement and sacrifice and mastery and service. So in turn we are brought to the need of insuring to boys and girls a fundamental acquaintance with the basic facts of reproduction and sex, of the secondary consequences of these facts, and of the problems and opportunities that flow from them.

We have thus three different kinds of "educational" service required of the high school; *information*, which comes chiefly in connection with courses having a biological foundation, such as botany, zoology, biology, agriculture, physiology, hygiene, home nursing; *interpretation*, which comes chiefly in courses dealing with human nature and human relations, such as literature, history, sociology, psychology, economics, civics, home-making courses; and *inspiration*, which comes not from school subjects but from people, whether the living contemporaries of the pupil's daily program or the vicarious but not less vital companions of fiction or history. There is needed, finally, as a matter of managing the adolescent, ample opportunity for physical and social and esthetic activities that will serve as outlets for his surplus energies, and as experiences in dealing with others under greatly varying conditions. Thus may the high school become a school of life, through laboratory and study and recitation, as well as through guidance for the emotional side of the youth.

8. Informational.—The first need for serious discussion of any problem, and for clear and sincere thinking about it, is a suitable vocabulary. But the vocabulary must be an intimate part of definite knowledge about realities founded on scientific information. A rough outline of the basic information would include the following main topics:

The primary facts of reproduction in plants and animals; the universality of sex in organic nature.

The principles of development, including the relation of external (environmental) factors.

The meaning of fertilization in mammals; with survey of the evolution of infancy and parenthood.

Menstruation.

Seminal emissions.

The internal secretions as related to development and as related to bodily changes in adolescence; as source of energy; as related to emotional changes.

Secondary facts of sex in plants and animals; their remarkable development in higher forms and their relation to such manifestations as music, art, religion, poetry, science, adventure, etc.

Modification of reflexes in lower animals; modification of our emotional responses; how our experience substitutes acquired modes of reaction for the "original" ones; how experience substitutes effective "artificial" stimuli for the natural ones.

Sex necessity: The fallacy of assuming direct sex experience to be essential to the physical or mental health of the normal person; the deteriorating effects of indiscriminate indulgence; the possibilities of turning sex impulses into higher channels and satisfactions.

Elementary principles of heredity: Continuity of the germ plasm; the individual as custodian of the race current; choice of mate.

The venereal diseases: In connection with principles of communicable diseases, their specific effects; after study of reproduction, the implication of the designation "venereal."

The bare facts above suggested can not very well be taught by themselves because, among other reasons, they are but special aspects of general biological principles and as such can be most easily assimilated by boys and girls in connection with the other subject matter with which they logically belong. Moreover, the attempt to teach them separately will inevitably distort the very perspective it is desired to secure. Growing out of this body of information are many facts of the social life and of human relations which may indeed be presented as so much information, but which are more effectively brought to the mind of the adolescent in connection with his problems as to the *meaning* of what goes on around him. They are therefore indicated below as part of the school's function of *interpreting* life to youth.

9. Interpretive.—It is not the need for food to sustain growth and exertions that drive the young child or the kitten to take food, but the feeling of hunger. In the same way millions of human beings have lived their day without science and without philosophy, eating and fighting and reproducing, for no better reason than that it has been their nature to yield to impulse, and that the requisite impulses were present. But it is one of the crowning peculiarities of mankind that at least sporadically a child will arise and ask, "Why?" He is content to go to sleep when he is tired, yet some evening he will ask, "Why must we sleep?" Eating is not onerous, but some day he will ask, "Why must we eat?" And just as this peculiarity has been one

of the factors in making what we call civilization, so it is one of the factors that must be taken into account in the adjusting of the individual to the life of the community. It is not possible to "let nature take her course" except in a state of nature; and our departure from the ways of blind impulse must be made acceptable to the intelligence of questioning youth.

The translation of the ways of nature into the ways of civilized man constitutes the special task of those teachers who deal especially with human relations, whether among individuals or among members of organic society. The chief problems upon which boys and girls need enlightenment are the following:

The home as an institution and as a social agency; the meaning of monogamy for the individual and for the state; the rearing of children; infidelity and adultery.

Illegitimacy: The facts and their implications.

Prostitution: The facts, their implications as to status; the "double standard."

Divorce: Reasons for legal or ecclesiastical restrictions; causes.

The conflict of human passions within the person; the conflict among individuals and among groups.

Mental health as unified purpose, or harmonized impulses.

The place of the quack in the community.

The teacher of literature or of the social sciences will be in a position to discuss the various problems that suggest themselves in the course of the year's work just in proportion as he is able to take for granted on the part of the boys and girls sound information regarding the basic facts. It should not be necessary for the teacher of English, for example, to take the class upon an excursion from the main theme for the purpose of explaining the facts of sex; but on the other hand, this teacher should not be tempted to evade a consideration of the fatherless child in the story the class is reading for fear of misunderstanding on the part of the pupils.

10. Inspirational.—Through the unconscious manifestation of ideals and principles of conduct, through unconscious demonstration of high qualities, no less than through discussion of human values or through exhortation to high living, does the teacher influence the immediate and the later conduct of the pupils. According to the teacher's own attitudes and ideals, and proportional to the teacher's own understanding both of the place of sex in human life and the rôle of sex in the development of the pupils before him, will he inspire and guide the pupils to a higher level of thought and aspiration. In so far as conduct is a result of ideals and attitudes that come through suggestion and imitation, the sex education of boys and girls will include the teacher's attempt to stimulate them, to

draw out their generosity and idealism, and to fire them with devotion to certain principles of conduct, as experienced day by day and as revealed in literature. The chief of these principles may be roughly outlined as follows:

Chivalry.

Service, as against personal advantage or the exploitation of others.

Responsibility.

Fair play, not only in sport or in business, but in all relations, including fair play between the sexes, or between *our* sisters and daughters and those of other social classes.

Self-direction; control, overcoming of temptations; firmness of purpose; direction of impulses.

Social well-being; elevation of quality of human beings and of human living; elimination of disease, of incompetence, etc.

The religious sentiments coming strongly to the surface during adolescence are closely related to the feelings that make possible the ideals here suggested. The teacher who can keep his theology completely separated from his recognition of these feelings in boys and girls may draw effectively upon religious motives in strengthening the disposition toward socialized conduct.

It is recognized, of course, that neither precept nor exhortation will produce the effects desired; nor can inspiration be expected from teachers who have neither ideals nor faith in ideals. At best the conscious purpose of the fine teacher is one of many factors in the character formation of boys and girls.

11. Learning through doing.—After all, conduct is closely related to feeling, and it is the feelings and impulses that call for first consideration in our training. There is, during adolescence especially, a rapid evolution of energies that must find an outlet. If we do not find suitable outlets that are satisfying, the pent-up energies will find outlets of their own along the lines of least resistance; and at times the results will be disastrous either to the individual or to others, or to both. We must, therefore, provide not only a great abundance but also a great variety of activity. Athletics will serve for some, but not for all, and in athletics there must be an opportunity for every taste. The community, which of necessity deprives the child of his spontaneous modes of self-expression, has the responsibility of furnishing him suitable channels to take their place. And it is chiefly through the school that boys and girls still under the direction of the school must find these channels. Hence the establishment of various kinds of clubs to cultivate hobbies; the organization of dramatics, of musical activities, of dancing and other forms of social entertainment; the planning and direction of excursions, hikes, plays, parties, literary and oratorical contests. All of these

activities should be considered just as definite and essential a part of the school's educational program as the "subjects" of the curriculum.

Through these and other social activities of the school the children find first of all a release for those "internal strains" that arise when the impulses to action must for any reason be restrained. But they furnish further an opportunity for practice in the give and take of human relations under a greater variety of situations than the resources of the classroom or of the individual home permit. They furnish, through the cooperation of selected adults, examples or models of decent relations and conduct between the sexes. They help boys and girls to discover significant traits of human nature—including their own. And they enable the teachers to discover the weak and strong elements in the characters of individual pupils, and so point the way to further helpfulness. In the case of organized athletics, which is usually under the direction of the physical education teachers, there is exceptional opportunity for personal help and for influence upon the group. For this reason physical education is given special consideration as one of the coordinate departments of the schools in Part II of this manual.

12. Recreation.—The importance of recreational and social activities under wholesome auspices can hardly be overestimated. During adolescence the desire for excitement and romance on the part of both boys and girls is at its height. A certain amount of companionship with the other sex is essential. This natural demand can not, despite what has been believed in the past, be repressed by strict rules and careful segregation. It must be satisfied in legitimate and well-controlled ways. Failure of the community to provide an adequate program of social activities for its youth drives boys and girls to seek elsewhere the excitement and associations which they crave. To offset the attractions of outside resorts, with their frequently demoralizing influences, the school should arrange for wholesome recreation, if it is to take advantage of its opportunities and meet its responsibilities to the full. Many teachers find the supervision of parties and dances onerous, just as they find it disagreeable to guide girls in selecting modest dress or in improving their manners; but in view of the actual situation it is futile to throw back upon the home or upon other agencies the entire burden of these essential services. The development of evening recreation centers in the schools, in all parts of the country, by providing recreational facilities for older people, furnishes, on the one hand, a valuable supplementary agency for sex education by helping to create a more wholesome attitude in the community at large and, on the other hand, points the way to more systematic organization by the school of the urgently needed recreational and social opportunities for the adolescent.

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CHAPTER II.

METHODS AND SUPPLEMENTARY DEVICES.

1. General aims and plans.—The introduction of instruction and guidance bearing on sex will no doubt, in particular instances, meet with special difficulties. The presence of boys and girls in the same class would preclude the discussion of many topics in the biology or physiology courses. On the other hand, the segregation of boys and girls in anticipation of certain lessons becomes too pointed. Advantage must therefore be taken of the groupings that automatically segregate the sexes for certain subjects. For this purpose, as well as for others, the physical training classes lend themselves admirably; and in many schools the classes in physiology are regularly segregated. Even in mixed classes, however, a great deal of the material concerning the origin of life and heredity and eugenics can be used where qualified teachers are available.

It is usually desirable that the teacher be of the same sex as the pupils, where information is the major part of the task, although this is not always essential. Some mature women can discuss these subjects quite easily with boys, and in certain cases make an even more effective appeal than many men. In this particular, as in others, the individual personality will determine what is wise.

The topics suggested as essential parts of the child's education with regard to sex should be presented in precisely the same way as are other topics in the various subjects of which they are to form a part. In some cases it will mean reading and recitation, in others informal talk or lecture by the teacher, interspersed with questions or discussion. There will be opportunity to use charts and diagrams or laboratory material, and lantern slides or motion pictures will fit in at other points.

In many cases the introduction of certain topics into the classroom will raise in the minds of pupils some of their intimate problems which they are unable to deal with satisfactorily alone; and these pupils will seek personal counsel, if given the opportunity. The teacher should therefore make it clearly understood that he will be available for interviews, without, however, pointedly intimating that certain pupils are in an exceptional situation.

In Part II are indicated several methods of providing sex education in connection with the various units of the curriculum. These

plans are offered as suggestions, and by no means exhaust the field. There are few courses that can not contribute in some way, and the alert teacher will find material adapted to his special subject even if it is not here presented in detail.

The first consideration is to avoid the special emphasis upon sex which has resulted from the attempt to ignore it. The extent to which the proposed program can be safely and effectively carried out in any particular school will depend upon the local conditions, upon the equipment and resources of the school, and upon the personnel of the teaching staff.

2. Individual conferences.—Much work of great value is being accomplished through personal interviews. The teacher who makes close friendships with the pupils and wins their intimate confidences, finds many opportunities for giving sex instruction, either casually or directly. The school doctor and the school nurse may also help in this way. Such work may be extremely effective, and the service it represents should be available to boys and girls no matter what other work may be done by the school. It makes possible the frank consideration of the pupil's individual problems. Many students find it easier to discuss these matters with an outsider than with their own parents. There should be on the staff of every high school at least one person of each sex who invites the confidence of pupils on personal matters, and who is competent to be of substantial assistance to them. Reference has already been made to the special opportunities of the physical-training teachers in this connection.

3. The school library.—In many high schools the library has become an important adjunct. It will be found most useful in connection with developing a sex education program, and with the help of the principal or an interested teacher it can even meet in part the emergency during the transition to a more diffused and comprehensive type of education. It can provide not only the masterpieces of literature which teach very important lessons on the conduct of life, and which are not included in the regular literature courses, but it can also provide a number of books bearing definitely on the subject of sex. The latter should, of course, be selected with the greatest care and restricted in circulation to the groups for which they are intended. A comprehensive library on sex is not proposed, but only a few of the best books on the subject, suitable for young people. In the appended bibliography (p. 94) will be found a list of books recommended for the purpose.

4. Cooperation with parents.—In a well-rounded sex education program parent-teacher associations will play a definite part. Such associations are now being formed rapidly throughout the country. They differ widely in purpose and quality in different localities and

on that account the work which they are capable of doing will vary. In most cases, however, these associations may be used as centers where parents can be aroused to the duty of instructing their children. Children who have reached high-school age without any sex instruction at home can hardly be introduced to the subject by their parents; in most cases it is too late then for successful home instruction so far as they are concerned. But during this period there is need of suitable home regulation, which can be worked out through the cooperation of teachers and parents. The latter can keep the children off the streets at late hours and to a large extent direct the way in which they spend their leisure time. If there are younger children in the home, the parents can be led to introduce them properly to an understanding of sex matters. Many parents fail to perform this important duty now because of ignorance and a failure to understand the methods to be used. By providing an opportunity for parents and teachers to meet together and to receive the information and viewpoint needed to overcome their difficulties, the school will be performing an important service for more adequate sex education.

There are many associations to which the plan of the school for better education with regard to sex can be presented without danger of arousing unreasonable antagonism; others will have to be educated. It will be of value to the school to secure the indorsement and support of the association for the conservative program proposed, even at the cost of slow education of the parents. Yet more and more can be done in the classroom and in the extra-class activities that will meet the approval of parents who would naturally object to anything under the name of "sex education." The development of the parents' understanding of school problems and school purposes must here proceed hand in hand with experimentation on material and methods suggested in Part II. Under no circumstances should the principal of a school turn over to any individual or organization of parents the task of providing lecturers, etc. He must keep the control of such matters as part of his regular responsibility.

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CHAPTER III.

TEACHER PREPARATION AND COOPERATION.

1. Personality.—Quite apart from any information or skill that the teacher may possess, the task of education in the field of sex makes certain special demands upon the teachers.

(1) The teacher must be clean morally. Sex education is essentially but an aspect of moral education, and "morals," it has been observed, "are caught and not taught." The life and character of the teacher must be in harmony with the attempted teaching.

(2) The teacher must have a normal attitude toward life. This requirement would disqualify those who have become too much engrossed in abnormal psychology, or who have developed morbid interests in the subject of sex. It would disqualify also those whose experiences or reading have tended to develop a pessimistic outlook.

(3) The teacher must have poise and judgment. While with most of us judgment comes only with the maturity of years, there will be found many young teachers who, because of scientific training or because of native ability, approach this subject more effectively than many of the older ones.

(4) Sympathy with the problems and feelings of young people. While the older teacher may have the advantage of better judgment and ripe experience, there is the offsetting disadvantage in many cases of being out of sympathy with the problems and difficulties of youth.

Assuming adequate training, two types of teachers frequently possess the essential traits of personality mentioned, so that they may in general safely undertake to deal with the facts and meanings of sex in the course of their work. (1) The mature person with considerable teaching experience, perhaps a parent himself; and (2) the younger teacher who enters into the nonscholastic interests of the pupils and who is primarily their friend. In most high schools there are to be found one or more teachers of these types, and they may well be intrusted by principals or supervisory officials with work in this field. In some cases where the principal finds it impossible to devote sufficient time and attention to those problems, the individual teacher should take the initiative, securing, of course, the approval of the principal.

2. Special knowledge.—Ignorance of material and method at present disqualifies many teachers who would otherwise be admirably suited to this work by character and temperament. Moreover, considerable knowledge of many sex matters is necessary not only for sound teaching in certain subjects but also for the proper understanding of growing boys and girls. Child study should include a consideration of the sex life of the child and of the manifestations of secondary sexual characteristics in adolescence. Many peculiarities in the conduct of children, especially during the adolescent period, can be understood only as account is taken of their sex development. Every high-school teacher should know, for example, something of the physiological and psychological significance of the familiar phenomena depicted as “puppy love” in such books as Inez Haynes Gilmore’s *Ernest and Phoebe* and Booth Tarkington’s *Seventeen*. Teachers lacking in sympathetic understanding of these matters constantly make serious blunders in their treatment of boys and girls under their charge.

To supply the necessary information as to subject matter and methods, three plans present themselves:

(1) The use of the school as a laboratory and training institute for teachers in service, as is the case increasingly in many other directions.

(2) Special courses at summer school. During the summer of 1921 thirty-six institutions offered such courses and many more are planning to do so in the years to come.

(3) University extension courses or systematic study of selected readings. Such extension work or private study can be made of special value if combined with intelligent observation of students and practical experimental work.¹

3. The school a laboratory.—Whenever in the past a demand for a new type of educational service or instruction has come, the high schools have not waited for the colleges and normal schools to train for them a body of special teachers. Rather have they, on the initiative of their principals and superintendents, attacked the problem with such resources as they had at hand. They have studied the situation which confronted them. They have considered the problems with their teachers. By various adjustments and devices they have worked out some satisfactory solution. Similar initiative and resourcefulness are needed in regard to the present problem of education with respect to sex, and there is no doubt that the schools will work out a solution as fast as they become aware of the elements of the problem.

¹ In Appendix B is an outline used for training courses in sex education.

It is obvious that under the most prompt and favorable action by the colleges and normal schools it would be a matter of years before new teachers adequately equipped through training for the work of sex education would be available for the high schools in sufficient numbers. Therefore the immediate task is to train those who are already teaching for this work. And the high school itself, as the teacher's workshop, is the place in which this training is to be carried on. As the perpetual training station for teachers, where through study and investigation they find ways for improving their methods and solutions for the various problems that arise from time to time, the school must prepare its teachers to deal with sex in education.

4. The organization.—With this conception of the school, progressive teachers and principals will confidently but carefully attack the problem and prepare themselves to exercise professional leadership. They will ascertain the qualifications desirable in those who are to take part in the various parts of the work, and early in the school year they will take stock of the available personnel and other resources of the school. They may constitute themselves into a committee, with some designation that avoids allusion to sex or to anything else that may strike students or outsiders as in any way out of the ordinary, such as "character-training committee" or "school-problems committee." There are manifest advantages in including in such a committee a teacher of physical training, a biology teacher, a domestic science teacher, with others who have an unusual opportunity either to observe the pupils closely or to introduce sex material of one kind or another in connection with their regular classes. Teachers should not be included, however, merely because of the department of instruction which they represent, but rather because of their judgment, character, and temperament, although it is important that many different technical viewpoints be represented. The size of the school will govern the number on the committee. In a large school enough should be appointed to make sure that all the students come easily into contact with the benefits which the committee may work out. In a small school one or two teachers may be enough.

In many schools the responsibility for organizing and instructing the teacher clearly rests with the principal; in others the initiative may come from the dean of girls, the teacher of physical education, or from some other teacher who is especially well informed or otherwise qualified for leadership in this work, or some particularly well-suited teacher may be designated by the responsible authorities to undertake further organization of the school's resources. After some study of the problem, this leader will select his committee or invite interested teachers to join it, call the group together, and explain the situation. He will impress upon them the importance

of the work and the care with which it must be approached. The teachers will study this manual with him and in addition selected books from the bibliography that seem to be of special value or that are immediately accessible. Principals who have adopted such a procedure find that in two or three meetings much can be done toward giving the teachers a tactful and scientific attitude.

5. **The procedure.**—Following this general study the members of the committee will select special problems for individual study. The biology teacher may be asked to organize the significant facts pertaining to sex that fall properly within his courses. The English teacher may undertake to compile a list of books in which there is a natural approach to the subject of clean sex living for consideration during the course. The teacher of history may be asked to record the historical incidents which suggest the value of high ideals in sex conduct or the high points in the evolution of woman's status. Likewise teachers of the other social studies, of home economics, of physical education, of physiology, of general science, will study the opportunities for introducing educational material regarding sex into their respective courses. They will confer again and compare notes. Then, on the basis of their study and conferences they will undertake to assimilate sex material into their own classes. Indeed, in many cases the thought and study given to the problems will of themselves open up opportunities for helpful instruction in a natural way without waiting for the formal recognition of such help as authorized "sex education."

After a suitable time has elapsed, these teachers will want an opportunity to report on the successes and failures of their activities. They should describe the exact methods which they used, the atmosphere of the class during recitation, and the reactions of the pupils. Such reports are best made shortly after the experiment. Since these reports are made to the whole group in conference, including in most cases the principal, the methods used can be frankly compared and criticized. The careful experimental attitude should be maintained always. After each conference the teachers will modify their methods in the light of the criticisms which have been made.

The success of this procedure will depend upon the determination of the principal or other leader to keep the group well organized and interested. Regular meetings held *once* in two to four weeks, with occasional reports to the faculty as a whole, are probably the best means for this purpose. The method outlined will of course be modified to meet particular situations. But a safe and sane program is to be developed in the school by some such method, which insists upon careful scientific study and at the same time makes use

of the school as an experimental laboratory and of the faculty as a cooperative group of investigators.

6. Nonscholastic activities.—Educators have long realized that unless information is translated into ideals and habits the true purposes of education will not be attained. From this viewpoint the social, recreational, and athletic activities of the school, to which reference has already been made, are of the utmost importance in sex education. But, as every principal knows, work of this kind will not take care of itself. Neither will it be adequately cared for if it is put into the hands of a large general committee. In schools that have succeeded best in this field a small, carefully selected committee of teachers has been formed. It has been the definite purpose of such committee on extra-curricular activities to organize the social and athletic and recreational activities of the pupils in a way that will develop most effectively high ideals and sound habits of conduct. Because of the importance of the social activities of the school from the point of view of sex education, the committee on this set of problems will cooperate closely with other members and committees of the faculty that are directing student activities.

7. Community survey.—The teachers who have given special study to the sex education problem will recognize the value of having definite knowledge concerning the recreational opportunities and limitations of the town or neighborhood in which the school is situated. To obtain such knowledge one or another of the faculty committees may profitably undertake a survey. Whichever committee does this will inevitably face the sex and related educational problems of the community. How do the students spend their leisure time, or their time out of school? How are they satisfying their normal desire for social companionship? What forms of recreation are available in the community? What danger spots exist? What are the legal regulations in the community concerning commercial dance halls and for-hire automobiles, and how are these regulations administered? Are they adequate? Other problems will grow out of a preliminary survey, and each locality may develop special problems of its own. On the basis of such a survey a program of school activities can be developed to replace or supplement what is available to the pupils outside. A survey of this type is a comparatively simple matter and can be carried out by one or two teachers who have a clear idea of what they are after, without much effort. The social workers of every community are not only a valuable source of information, but are usually ready to cooperate with and guide teachers wherever they are given the opportunity.

The methods here suggested have already been used with success in a number of high schools. Principals and teachers already in

service can formulate and apply a comprehensive program of sex education which will be of inestimable value to their students and to their communities.

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PART II.

SEX EDUCATION IN THE SUBJECTS OF THE CURRICULUM.

CHAPTER IV.

THE BIOLOGY COURSE.

1. Foundations in facts.—Whenever the attempt is made to influence ideals and conduct, through exhortation, through discussions, through inspirational addresses, through indirect suggestions, through art or the drama, there is always assumed a certain background of knowledge or apperceptive basis. So in education with regard to sex, a knowledge of basic facts is essential for any development of insight and understanding and for any rationalized standards of conduct. In order to make possible the intelligent discussion of various problems that arise in the study of the humanistic subjects, in order to make effective the large mass of indirect suggestion and allusion of which so much of our "moral" education consists, the pupils must have a secure foundation of pertinent and reliable facts of life.

And these large facts concerning mental and emotional aspects as well as physical are parts of the subject-matter of biology. Hence this department of instruction is for the majority of high-school pupils the most favorable one for laying the intellectual foundation for any sex education that the school may undertake, whether directly or indirectly. For the younger high school boys and girls such knowledge is even more important as a means for dissipating false ideas received in earlier years, for allaying suspicions, for clarifying misunderstandings, for satisfying curiosity, and, in frequent cases, for preventing serious worry.

2. Sex and life.—Sex permeates life so completely that no honest teaching of the science of life can possibly avoid dealing with it in one way or another. If the type method of study is followed, morphological ideas are foremost; in plants as well as in animals the differentiation of reproductive from vegetative systems and of male and female from each other are the outstanding criteria of the types, and the teacher can avoid sex only by an arbitrary omission of essentials. If emphasis is on the ecological aspects of life, we find the most striking and the most significant adaptations and adjustment in terms of racial survival rather than in terms of individual maintenance, which again means that reproduction and sex can be es-

caped only by a violent amputation of the subject. If for any reason the economic aspects of the living world receive the major part of the attention, we must confront the facts of plant and animal breeding, the modes of dissemination of injurious fungi, the life histories of destructive insects, the rôle of microorganisms in the cycle of life; and these involve reproduction and sex. And if the study is organized along the lines of plant and animal processes and activities, we find again that the nutritional aspects of life sink into insignificance, both from the viewpoint of interest and from the viewpoint of practical value, when completely divorced from considerations of the perpetuation of life, the origin of life, the relations between successive generations, the evolution of secondary and unessential structural and functional traits.

Teachers of biology, in so far as they are also teachers of boys and girls, do not remain content with the imparting of knowledge; application to the practical affairs of life comes forth constantly as an integral part of the teaching process. Indeed, the skill of the teacher shows itself not so much in the volume of his special subject matter that his pupils carry away with them as in the by-products of their mutual interactions.

3. Sequence of topics.—Any arrangement of topics studied must be one of convenience, with the understanding that there will be constant returns to earlier topics for the purpose of tying them up with those considered later. This repetition, which is assumed by all biology teachers in connection with the various topics, may suggest in connection with sex and reproduction a disproportionate amount of time or undue emphasis. But in actual practice the emphasis is not excessive. Each repeated reference to any topic brings in a new set of associations. Instead of drill or hammering in, it means organizing, orienting, assimilating into a complex body of relationships, and so subordinating each idea to the whole of which it is to form a part.

The most important groups of ideas bearing upon sex that should come to the boys and girls from their study of biology have been indicated on pages 9 and 10. Their presentation, in accordance with the general principles discussed in the chapters of Part I., must be *not as a separate series of topics, but each in connection with other topics*, as a natural and incidental part of the matter in hand. The relationships of these various items to the general subject-matter of the biology course must be the first consideration in planning the work.

4. Preliminary biological topics.—Many teachers prefer to postpone the study of topics related to sex until after they have become acquainted with their pupils, and until the pupils shall have learned something of the methods and principles of biology. Yet in many

schools the study of the subject begins with flowers. There is apparently nothing to choose between the two modes of approach. The order in the following suggestions is for the benefit of teachers who prefer the former method.

The study of types, organs, functions, is confined at first to the vegetative or nutritional. Principles of absorption, digestion, and circulation are studied with special reference to assimilation and growth. Cell division may be treated as the culmination of assimilation and growth—i. e., the expansion of protoplasm; and then in its relation to the growth of the many-celled organism, and the discontinuous growth of unicellular organisms, i. e., the perpetuation of protoplasm, bringing out the idea of the immortality of protoplasm.

Respiration as related to energesis and excretion as involved in metabolism are developed as incidental or contributory to the idea of the fundamental characteristics of protoplasm; namely, growth, contractility and irritability. These studies will have brought out the idea that fundamental processes of protoplasm find for themselves a great variety of analogous organs, and these are illustrated in several types of plants and animals—food-getting and food distributing organs and systems, respiratory and eliminating organs and systems, specialized receptors and effectors adjusting the organism to the environment. There will have been an opportunity to become acquainted with ducts and specialized cavities and openings, and glands. In the teaching of glands, for example, it must be made clear that they may be excretory or secretory; that the fluids elaborated may be discharged through special tubes or areas, or they may be discharged directly into the lymph and so reach the blood stream (the so-called internal secretions); that the products may be specific or incidental to the metabolism of specialized cells having a definite function (e. g., fatigue poisons).

The study of the general biological principles will also introduce the pupils to a consideration of the principles of plant and animal behavior, with special reference to the evolution of the higher human characteristics, with the development of control over the forces of nature—including human nature—and the deliberate modification of instincts.

The subject of bacteriology may be approached in a variety of ways, depending upon the general plan of the course (as to whether it is morphological chiefly or taxonomic, etc.). In some cases the bacteria are studied as one-celled organism; in other cases, as important agencies in maintaining the life cycle, through decomposition and nitrogen fixation; in still others they appear in a discussion of different types of life relation, for instance, to illustrate parasitism. Or they may be introduced directly as agents of pathogenic infection.

No matter what the first introduction to them is the pupils should learn before they are through that "bacteria" means all of these things. In the discussion of infectious diseases gonorrhea and syphilis may be mentioned by name among the others without prejudice, and just as attention is directed to the symptoms or effects of tuberculosis and diphtheria, and as practical control is indicated in typhoid fever or smallpox, so the symptoms and effects of these two venereal diseases can be presented. For the teachers who are not yet confident enough in themselves and in their pupils this preliminary introduction of these diseases as examples of communicable infections will be restricted to a consideration of the important effects, with only passing reference to modes of infection, the so-called innocent modes alone being mentioned.

As a result of these studies the pupils should be left with a very clear appreciation of the factors that are favorable to metabolism and the factors that obstruct it. Since in all of this work plants, animals, and human beings are drawn upon for illustrative material the pupils gradually acquire a certain objectivity with regard to human affairs. Instead of a discussion of the stomach suggesting their own stomachs it suggests some generalized enlargement of the food tube; instead of a discussion of breathing producing an alteration in their own respiration rates it suggests visions of gas exchange through leaves and root hairs and frog skins and other surfaces too varied to form a clear image. And finally study makes possible the further consideration of organic processes without great danger of making a subjective reference of all new ideas.

5. Special topics and their connections.—With the background developed as suggested, the study of reproduction and its implications can now proceed without embarrassment. In some schools most of the references to reproduction and sex are confined to the second term of the course in biology; and for this term the sexes are segregated. Where the material is distributed more uniformly the procedure is different and will be discussed later.

(1) *Development.*—As an introduction to the primary facts of reproduction, we may well begin with the study of development. The origin of cells from cells is already familiar to the students. In any concrete case this means that the multicellular organism, consisting now of so many cells, consisted some time ago of fewer cells; and some time before that, of still fewer, and so on to the very limit, namely, a single cell. Or we can begin directly with the dogmatic assertion that every organism begins life as a single cell. Connect up here the facts already learned as to the conditions favorable to growth: What are the conditions that will make it possible for the single-celled organism to become a many-celled organism? Call at-

tention to the idea that whereas among the unicellulars each cell division is followed by a separation of the new cells, in a multicellular the resulting cells remain adhering to each other. Bring out differentiation of tissues and organs in such forms as fish, frog, flowers, keeping constantly the question of conditions in sight—water, food, suitable temperature, oxygen, etc.

(2) *Asexual reproduction*.—With development established as a corollary of cell-growth and cell division, the next question is one of the origin of particular developing cells. Asexual reproduction by means of undifferentiated vegetative parts such as roots and stems, and by means of specialized vegetative structures such as bulbs and tubers, leads to asexual reproduction by means of specialized single cells such as spores. The formation of spores in yeast and in molds can be readily demonstrated, and the ecological notion developed of spores as stages adapted to the survival of conditions unfavorable to vegetative expansion.

(3) *Sexual reproduction*.—The next step is the formation of zygospores in Spirogyra or Cladophora, or Mucor, involving the union of two cells. This introduces the concept gamete, which must be made clear as a cell which unites with another, before the attempt is made to differentiate the male and female. The zygote resulting from the fusion of two gametes is the origin of a new generation. In the lowest forms there is no difference between an ordinary individual or cell and a gamete; that is, fusing or conjugating appears to be one of the many processes of which a living cell is capable. This makes conjugation fall into a position coordinate with assimilation, respiration, contraction, irritability, and fission. As conjugation is studied in higher forms, both plants and animals, we find first a specialization of conjugating cells from vegetative cells, and finally of the two kinds of gametes from each other. But this is quite in line with what we have already studied of the progressive differentiation of tissues and organs along functional lines. We come then rapidly through lower plants and animals to the flowers on the one hand and to the vertebrates upon the other.

(4) *Evolution of Parenthood*.—The study to this point gives us, then, the universality of sex in life, but it also places reproduction, whether sexual or asexual, in line with the other basic manifestations of protoplasmic activity. As we become acquainted with several types of living things, on the side of reproduction, it becomes possible to make significant comparisons. There is the prodigality and waste of life at one extreme, contrasted with economy and efficiency at the other. There is the inverse correlation between numbers and the amount of service rendered by parents—in the form of protection, food, and other aids to development, such as high temperature in birds

and mammals. The evolution of infancy and parenthood is a fascinating chapter that can be developed with unfailing interest, with excellent indirect effects, and without the slightest embarrassment.

(5) *Embryology*.—Frog and fish eggs in the process of development can be observed directly by the pupils. Low-power microscopic studies made from day to day for a week will reveal all the essential facts upon which later chart and model demonstrations can erect a large and complex body of real understanding. In many schools hen's eggs are incubated and the stages of the developing embryo are shown to the pupils with excellent effect.

(6) *Mammals*.—Internal fertilization having been introduced with the birds, the distinctive achievement of the mammals is seen to be the prolonged development of the embryo within the body of the parent, with continued supply of food from the body of the parent after birth. This calls for the study of pregnancy in mammals, including structure and functions of the uterus, the placenta, and the umbilical cord. By means of charts and models illustrating the structures in the rabbit or cat, or some other mammal, the essential facts that are common to all mammals can be presented. Some schools use dissectible manikins that show *all* the internal organs with good results.

(7) *Gonads and glands*.—In the study of specialized gamete-producing organs it is important to avoid the frequent confusion regarding "glands." While it is true that medical practitioners constantly speak of the ovaries and testicles as glands, these organs are in their anatomy and morphology very different from glands, either of the external secretion or of the ductless kind. They represent rather primitive tissue which continues to proliferate; but the *cells*, not *fluids*, which they produce constantly after maturity, are of a specialized kind. The biologist would not think of calling an archeogonium or antheridium of moss a gland. The confusion is worse when we consider that as a matter of fact the gonads of higher animals do actually discharge the germ cells in a fluid, and that in addition the interstitial cells of the gonads yield an important *internal secretion*. By making clear first the general structure of ovaries and spermaries in the fish or frog, and by calling attention to supplementary glands related to keeping the germ cells suspended in fluid, and to the nourishment and protection of the young (secretion of yolk and other food; secretion of eggshell) we may separate the idea of glands from that of gonads. That leaves us free to introduce the interstitial secretions without confusing them with the seminal fluid or the menstrual discharge.

(8) *Internal secretions*.—After the study of enzymes and hormones in connection with a consideration of digestion, excretion, etc., it is a comparatively simple matter to introduce the interstitial secre-

tions of the gonads. The absorption of these substances by the blood and their distribution to all parts of the body result in modifying the growth and activities of many organs. Reference can be made to the result of castration in domestic animals; the temper and energy of the bull compared to the ox; the passivity and softness of the capon compared to the cock; the altered cat, the gelding, and so on. Attention may be called to the former practice of castrating male slaves and the effect of the operation upon the character and energy of the individual. There are corresponding changes brought about by castration in female animals. These internal secretions act as drives or stimulants—compare the thyroid, for example; and like other hormones have specific effects upon different organs. As a consequence, we have the so-called secondary sexual characters.

(9) *How we learn.*—As part of the study of animal behavior, many teachers find opportunity to give a few lessons on the processes by which conduct is modified from the primitive impulsive type to the controlled and purposeful type. Instead of teaching that habits are formed as the simple consequence of repeated action, we can show that learning in babies and animals consists of replacing the natural stimulus for producing a given action with a substitute stimulus or symbol; and the similar substitution of one type of action for another type that comes naturally. Thus the secretion of saliva or gastric juice, which comes originally in response to a taste or odor, can later be aroused by the sight of certain objects, or by certain sounds—the dinner bell, the *name* of a favorite food, and so on. In the same way we substitute satisfactions, as when a foot-ball game or oratorical contest takes the place of fighting, and when motion pictures or reading satisfies the desire to travel. Young people are keen to see the implications of these fundamental facts of human nature. In addition to explicit assurance that the same principles apply to the sex side of life they need abundant opportunity to find satisfactions in the substitute outlets of work and play and service. But these opportunities belong beyond the realm of biology teaching, and are discussed further in Chapter VII.

(10) *Heredity.*—Such discussions of practical human problems in a biology class are sure to lead to the question of “heredity and environment.” The earlier studies have emphasized the environmental factors in their relation to development, growth, health. The main topics of the study of heredity, which should be illustrated from plant and animal material as well as human, are individual variation—distinction between native variation and acquired modification; elements of Mendelism; practical applications in plant and animal breeding; undesirable and especially desirable human traits that are heritable; and the relation of heredity to the germ plasm. This gives

opportunity to draw in large outline the notion of the stream of germ plasm, and to suggest the individual as bearer or custodian of the germ, rather than its creator. The responsibility implied by the principles of heredity is that of learning to discriminate among human qualities and their bearers, or resolving to give all human values a fair opportunity to develop, and of preventing the contamination of that portion of the stream of which we are the individual custodians.

(11) *Venereal diseases*.—If the venereal diseases have already been discussed with the other communicable diseases, they may be referred to again after the facts of reproduction have been studied with the attention now directed to (a) their most common mode of transmission, (b) their effects as a cause of sterility, and (c) the implications of sexual promiscuity.

(12) *Personal problems*.—Although the facts and hygiene of menstruation, the facts regarding seminal emissions, masturbation, and "sexual necessity" are, strictly speaking, biological materials, the large emotional element associated with these topics and the almost inevitable personal reference resulting from their mere mention make it desirable to deal with them as problems in hygiene. For this reason a fuller discussion of these four topics is presented on pp. — of the chapter on physical education and hygiene. In many schools the teacher of biology will be better prepared to guide the pupils in these matters than any other teacher. There should, of course, be complete understanding between the teachers, so that both undue repetition and complete disregard may be avoided.

6. Method and manner.—A study of many reports from different high-school biology departments show considerable variation as to the sequence in which topics related to sex are introduced; but there is fairly general agreement as to what are the important topics and as to the manner of their presentation. The scientific attitude is often mentioned as prerequisite on the part of the teacher. The teachers who report upon this agree that the same manner and the same method which are found effective in the teaching of other topics in biology are found effective in the parts dealing with reproduction, sex, eugenics, etc. There is no need for a different voice or a different facial expression.

Where the classes have both boys and girls, it has been found possible to distribute the various topics throughout the biology course without causing the slightest embarrassment. Segregation of such classes for the treatment of special topics, such as menstruation, seminal emissions, and masturbation, is desirable for obvious reasons; but the very act of separation has such marked disadvantages that in many schools it is considered better to work in these topics at

times when the segregation of the sexes is brought about in connection with some other subject, as was suggested on page 15.

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CHAPTER V.

THE GENERAL SCIENCE COURSE.

1. Science socializing education.—The rapid extension of the teaching of general science in junior high schools and in the first year of four-year high schools has made possible, if not inevitable, a new emphasis upon the social ends of education and of science. Science is preeminently social in its content, its method, its utilities. The important knowledge, the great principles result from the contributions of many individuals; and these are not chance accretions, but organized and assimilated assemblages. Every discovery is possible because there are available the results of earlier discoveries. In the carrying on of research we must constantly make use of the specialized knowledge and services of others in a multitude of ways—the services of our contemporaries in various fields, no less than those of the past contributors; and finally, in the applications of science we are constantly dependent upon opportunities for joint and cooperative use as well as upon joint and cooperative production. Health protection and improved varieties of plants, wireless communication and travel through the air, new building materials and new technical processes, these are possible only to the extent that increasing numbers of human beings become integrated through their common modes of living, through frequent intercommunication, and through intricate exchange of services. The widespread teaching of science is thus revolutionary, in that it shifts the interests of teachers and pupils from the old ideals of competitive advantages for the educated or “cultured” individual to the newer ideals of joint advantages to the community or the race through further cooperation in the promotion of science and mutual service. From this new point of view, the teaching of science finds motivation not alone in the natural curiosities and interests of young people, but also in their emerging sociability and idealism; and affords a rationalized basis for individual responsibility beyond that furnished by the usual religious and moral training. This last point is related, on the side of method, to the fact that science teaching gives considerable scope to individual initiative and makes appreciable the significance of the individual in relation to the group.

2. The value of science.—The application of any science or of scientific knowledge in general lies in guiding human behavior for

the more effective adaptation of means to ends. The chief value of biology is the guidance that its facts and principles offer in our management of living things—including men. The outstanding value in the method and spirit of scientific study lies in the establishment of the disposition and habit of applying this method to the discovery of facts and principles pertinent to every problem that may arise, through observation and experimentation; and in the development of skill in discriminating among facts, in the making of valid deductions and choices in practical daily life. These values of science obviously include knowledge, application, and attitude in the whole range of sex and social problems.

3. The content of general science.—Whether we consider the subject matter from the viewpoint of what children need to know or from that of what children want to know fundamental facts of the renewal of life must form a part of the instruction given. The majority of the pupils who are in a general science class this year will probably complete their formal schooling within the year; and of those who go on, most will not study biology or physiology. The commission on the reorganization of secondary education, in the report on the reorganization of science in secondary schools¹ recommends a sequence of four years of science, consisting of general science, biology, and two years of specialized science. But comparatively few of the pupils in the course of the next dozen years will receive this full program. If instruction regarding reproduction and sex is vital to these children—and every investigation shows that it is—they must get it at the most favorable points in their school career. The commission finds therefore that although it is impossible to prescribe a complete syllabus in general science that would serve equally all groups there are certain topics of general value to all pupils and among these are the following that are related to sex (page 28 of the report):

Meaning of possible overproduction as shown by calculations of possible numbers of new individuals—rabbits, fox, wolf, potatoes.

Limiting conditions.

Why some forms stay and others do not.

Artificial selection.

Good seed, poor seed and the results.

Germination.

Why a plant needs water.

How liquid goes from cell to cell.

Products and by-products.

Plant reproduction.

¹ U. S. Bureau of Education, Bulletin 1920, No. 26; Supt. of Documents, 10 cents.

Structure of flower.

Seed dispersal.

The problems of successful living.

The complete list of topics suggested contemplates a substantial expansion in actual practice, in view of local or temporary conditions, and in view of the teachers' and pupils' interests. This makes possible, in a school whose general science students do not for the most part continue in school or do not pursue further biological studies, the introduction of essential material related to sex.

The biological portion of the general science course may therefore be treated as suggested on page —, or correlations can be made with the above topics in harmony with the methods followed in the course as a whole.

4. Treatment of material.—In the study of food and food getting, consider the contributions of science to the solution of the food problem, not alone on the side of what to eat and how to eat, but on the side especially of food production. This involves an understanding of a great deal about plants and animals—how they grow, how they are multiplied, how they are improved, how they are preserved against decay and destruction. These are all organic problems that furnish opportunity for the study of reproduction, heredity, instincts, pathogenic microorganisms.

In the study of the flower, the pollen and the embryo sac (or the stamen and the ovary) may be spoken of as, respectively, the male and the female, notwithstanding the likelihood that for certain pupils this teaching may be later radically modified in terms of a more precise morphology. As with other topics studied, the teacher will indicate that the principles worked out are of wider application—in this case to all plants and animals, including man. In connection with the study of flowers, the facts and meaning of pregnancy can well be introduced. Where this study comes early in the course, only passing suggestions may be possible, and the topic will be brought up again after the pupils have become acquainted with other types of parental relations with which comparisons can be made.

Good seed and poor seed can bring in questions of (a) stock or heredity, as illustrated by the kind of plants seeds will grow into, and (b) environment or nurture, as illustrated by deficiency of food in some seeds. Two eggs may have the same quantity of food, and the same proportions of protein, fat, etc., and both will hatch when exposed to the same temperature; but one will yield a White Leghorn, the other a Plymouth Rock.

The problem of successful living will raise questions of factors affecting health. The study of health factors on the scientific plane

will inevitably bring out our interdependence—the need for community action in many matters, and the necessity for each one complying with the standard practice. With this idea can be connected the responsibilities implied by an understanding of the principles of heredity, the sources of certain undesirable human traits, the perpetuation of desirable human qualities.

The study of photosynthesis brings out the idea of products and by-products. Where cells and metabolism have also been studied, this offers an opportunity for introducing the idea of by-products producing secondary effects (e. g., carbon dioxide excreted by roots dissolving calcium carbonate).

Internal secretions can be taught immediately after digestion, excretion, and circulation have supplied the necessary foundation. Reference to the internal secretions of the sex organs can be correlated with the ideas (1) that different substances act upon protoplasm in specific ways—stimulants, narcotics, alcohol, poison, etc.; (2) that the by-products of metabolism will vary (*a*) with the specific qualities of the protoplasm (diphtheria or typhoid bacillus, nerve tissue, or muscle tissue, etc.), (*b*) with the nutrition, activities, or other external variables (amount of fatigue, temperature, food, etc., as affecting excretion and secretion); and (3) that anything which gets into the blood is rapidly distributed.

The study of seed dispersal, germination, and various subdivisions of “the problems of successful living” brings out discussion of what race preservation means beyond the mere production of new individuals. Now we can study the relation between numbers of individuals and their chance of survival, parental care, the significance of a longer infancy, and so on, and develop the concept of the home as something more than a shelter, as in fact the artificial environment for the most favorable rearing of human infants, for the cooperative nurture of personalities. A study of a graded series from fish to mammal, with all the significant differences, will impress practically all of the pupils with the higher values and possibilities of the father-mother-children relation, and with the reciprocal responsibilities implied for each individual concerned.

5. General science courses.—In one high school that has general science in the first year and biology in the second, the freshmen are given considerable sex information in the biological part of the general science work. There is a rapid survey of the production of food and the nutrition of plants, followed by a tracing of food from the mouth to its ultimate service in the cells of the body. The study of digestive glands leads to a study of internal secretions, beginning with the pancreas because this supplies secretions both through a duct and directly to the blood. Then the thyroid, pitui-

tary, testicles, and ovaries are treated, with reference to the effects of their secretions upon growth, mental states, and energizing, these being correlated with the ideas of perfect stature or bodily form, high mentality and fine personality. The hygiene of special organs is taught as an application of what has been learned of physiological processes and conditions; plants and animals are constantly studied in parallel. After respiration and excretion, reproduction is taken up in a simple flower and run through to the germination of the seed. Animal reproduction is begun with an infusorim, and compared with yeast. A few invertebrate types are studied briefly, but there is then a more thorough study of a fish or a frog. After an explanation of formation and extrusion of the gametes, fertilized eggs are studied in the laboratory to see the early stages of development. The evolution of parenthood is surveyed with emphasis on the advantages of prolonged infancy, increased care of the young, and so on. Mammals are introduced through a rat, cavy (guinea pig), or rabbit, and the big advances represented by the mammalian type explained. Here, as in many other schools, it is found best to deal with gonorrhea and syphilis in connection with other communicable diseases. One or two periods toward the end are given to eugenics, the cost of delinquent and defective children to the community, and the importance of conserving the superior human traits through inheritance.

6. Methods in general science.—The tendency for science teaching is to depend more and more upon the common-sense implications of the subject matter for the desired moral or social effects and less and less upon exhortation or dogmatic preachments. But as children are very suggestible, and as they often draw the most absurd inferences, there is still enough for the teacher to do in addition to placing before them the bare opportunity to learn from the material. The "science" which we teach must then come to mean for boys and girls not merely a lot of answers to important or interesting questions, but above all a method for getting practical answers to all sorts of utilitarian and speculative questions. The study should lead to the application of science to problems of conduct in the social sense. We must depend upon accurate knowledge for standardizing our actions. We can not depend upon our instincts alone; we can not depend upon tradition or convention alone; we must perforce carry on (to paraphrase Descartes) with the best knowledge available—which may indeed be merely convention or outworn tradition—until we find better and better ways. These principles apply wherever it is possible to have knowledge, and science seeks in every direction without prejudice.

From the viewpoint of social health science teaching offers the opportunity to establish among boys and girls the general concept of

well-being dependent upon standard practice derived from accurate knowledge. Through the application of science we can avoid a large number of obviously undesirable conditions—communicable diseases, insect pests, industrial accidents, destructive fires; and we can insure a large number of obviously desirable conditions—increasing yield in agriculture and industry, improved varieties of plants and animals, improved transportation and housing, more skillful workers, more beautiful surroundings, healthier and happier men and women. These preventions and productions are the outward and visible signs of man's increasing mastery of the world around him and of himself. They involve an increasing participation of the individual in the conscious work of the race. Everyone must take his part of the responsibility, not merely his share of the yield in larger and richer and happier living.

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CHAPTER VI.

THE PHYSIOLOGY COURSE.¹

1. Physiology in the high school.—In many high schools in all parts of the country, first-year students (ninth grade) are required to take a year of biology, which consists of one term of physiology following (in some cases preceding) a term of botany or zoology. In other schools a term of physiology is offered as an elective after the first year, often with the prerequisite of some other biological course. In spite of great variations as to methods used, as to laboratory work, and as to the efficiency of the teaching, most of the physiology courses have in common a large proportion of the subject matter, and practically all claim to have direct value in relation to teaching health principles and health habits. Without exception the content of these physiology courses lends itself very well to the introduction of topics bearing on sex reproduction and the related problems of physical and mental health.

2. The content of physiology courses.—A typical physiology course carries the following topics that are significant in connection with sex education:

Cells: Structure; kinds.

Elements and compounds found in the body.

Food and digestion.

Circulation: Nutrition, respiration, and excretion of cells.

Ductless glands and hormones.

Adaptation and coordination of organs; disturbances in coordination.

Osmosis.

Respiration and excretion.

Bones and muscles; differences between the sexes; hygiene of posture.

The nervous system; how body is controlled; fatigue; exercise.

Bacteria and communicable diseases; reactions of the blood to specific invasions.

Conservation of health; cost of illness; sacrifice of child life.

To these topics may be added several that are more specifically directed to an understanding of sex with a view to better self-control and adjustment. These are discussed in Chapter IV.

¹A considerable portion of this chapter is adapted from "A high school course in physiology in which the facts of sex are taught," by Miss Grace Ellis. U. S. Public Health Service, V. D. Bulletin No. 50.

In an increasing number of high schools a considerable amount of laboratory work is required with the course in physiology. This includes the examination of heart and lungs and other organs of cattle, blood counts, microscopic study of cells and tissues, experiments on digestion, the making of pure cultures, examination of stained bacteria, study of nerve-muscle preparations and of various reflexes. One school gets internal sex organs of mammals from a slaughter house.

3. Method.—Where the facts of sex and their applications are taught in connection with physiology, it is generally agreed that no special attention need be called to these matters as being in any way different from the other topics in the course. In a large boys' school it was customary for years to send word home with the pupils that a lecture would be given by the physiology teacher on the genito-urinary organs on a certain date. This was done in order that the parents who were so disposed might have their boys excused. None ever asked for exemption, and there were so many expressions of approval and appreciation from fathers and mothers that the consent of parents is now taken for granted and no special announcements are made. In the meantime the various items related in any way to sex have become distributed through the course, in connection with the topics to which they are most logically related, instead of being segregated into a special lecture. The topics in the physiology course are all treated first as scientific facts and principles, and then as useful knowledge to receive practical application.

Where considerable reference to sex matters occurs in a given recitation several teachers feel that it is desirable to close the period with a discussion of some remote subject in order that the pupils may leave the room with an easier return to every-day thoughts and topics. For this purpose one high school follows the plan of assigning some review lesson for a day on which certain sex topics are to be discussed, beginning the period with the new material and closing with a rapid quiz on the foreign review topic. Other teachers, however, in increasing numbers feel that there is no need whatever for any such device. Much depends, apparently, upon how sure the teacher is of himself or of his pupils. A device may be useful for many teachers who will reject it when they become more experienced. A great deal depends also upon the kind of instruction received by the children before coming to high school.

Generally this instruction is presented to boys and girls separately and by teachers of the same sex. In a few schools, however, experienced women have been handling the subject very effectively in classes of boys.

4. Development of topics.—In connection with the study of cells, single-celled plants and animals, their reproduction and the immortality of protozoan protoplasm, are presented. Then follow sexual reproduction, the formation of spores in molds, and conjugation of paramecium with subsequent division. Some teachers here lay special emphasis upon rejuvenescence as a result of conjugation or upon the advantage of combining the varied experiences of many individuals. It should be noted that these and other attempts to explain the origin or the value of sex are purely hypothetical, and that it is far from scientific to emphasize one or another as though any such hypothesis had a universal and permanent validity.

In some schools the flower is introduced (usually for a very brief period) as a means of presenting conjugation in a highly complex organism. But experience shows that this is quite unnecessary, unless it is the intention to expand all of the physiology teaching to include plants as well as animals. The facts of conjugation of specialized sperm and egg can be introduced with the fish or frog. This comes, at any rate, very close to the study of the cells, to explain the origin of the first cell of which the individual consists. Attention may then be called to the fact that the gametes must remain in water, and that among land (and air) animals the sperm is introduced directly into the body of the female, where fertilization takes place. In a number of schools this is taught in connection with bees, since the nuptial flight may be observed.

In some schools the study of fertilization is followed immediately by that of development, the embryonic stages and tissues, the nutrition of the fetus through the placenta, etc. In other schools different stages in the evolution of parenthood and infant care are first studied. Structures and habits related to the protection and nutrition of the young are explained with the help of diagrams. In the study of development attention should be given to the facts of maturation, the meaning of the chromosomes and of the reduction division. The dependence of the young mammal upon the mother for its food is connected with the study of osmosis. "A clear understanding of the manner by which the embryo receives food and disposes of wastes will do much," writes an experienced teacher,² "toward removing the fear of prenatal influences which hangs over many mothers." It should do much, also, toward dissipating many superstitions and fatuous hopes. This study not only relieves uncomfortable curiosity but is reported again and again to show evidence of having increased the boys' reverence for motherhood.

The study of the blood, after that of the other nutritional processes of the body, gives an opportunity for a thorough discussion of the spe-

² Grace Ellis, "A High School Course in Physiology in Which the Facts of Sex are Taught." U. S. Public Health Service, V. D. Bulletin 50, p. 8.

cific diseases and of the reaction of protoplasm, so marked in the white corpuscles, to specific chemical stimulation. Bacteriology then should include gonorrhea, with its relation to sterility and ophthalmia neonatorum, and syphilis with its more important effects upon the nervous system and upon offspring. In the study of modes of infection the usual channels of these diseases, which classes them as venereal, are given, as well as the relatively rare innocent channels. On the side of application or motivation it is coming to be generally recognized that the venereal diseases can not be effectively presented as horrible things to avoid. No teaching can scare boys into avoiding illicit contacts. Much more effective is the emphasis not upon what may come to one from such contacts but what he may bring down upon others, such as wife and children. The general facts of venereal diseases—their prevalence, their cost in human misery, their indirect effects in transportation and industrial accidents and in defective offspring—can be presented without exaggeration and without manifestation of horror; they are quite eloquent enough of themselves. Indeed, there is danger of unintentional overemphasis to the point of developing in some susceptible boy a real anxiety over having been possibly infected, perhaps innocently, or in some girls horror of all males as the secret bearers of these dreadful maladies. Attention should be called to the laws of certain States^{*} requiring medical certificate of freedom from these diseases as prerequisite for a marriage license.

The subject of ductless glands is taken up either after the study of digestion and excretion or after the study of the nervous system. The advantage of considering internal secretions in connection with the nervous system is, first, that it gives a better foundation for understanding the modifications of conduct and feelings by chemical means; and, second, that it makes easier the avoidance of confusion between the glands and gonads as producing specific substances or bodies on the one hand, and between the gonad products (gametes) and the interstitial secretions (hormones) on the other.

The study of the nervous system gives opportunity for teaching how instinctive conduct is modified and how control is achieved, not through the unconditioned exertions of a vague "will" but through the establishment of habits and attitudes that determine our responses to situations in accord with accepted ideals and purposes. It is here that may be most profitably discussed such problems as responsibility for our own conduct and the conduct we arouse in others—e. g., the effect of a girl's attitude upon the familiarity which boys will allow

^{*} Laws requiring a certificate or a statement of freedom from venereal disease (or from infectious diseases including venereal disease) have been passed in Alabama, Indiana, Maine, Michigan, New Jersey, New York, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, Utah, Vermont, Virginia, Washington, Wisconsin.

themselves. Many teachers find effective in this connection a few experiments, in which all the pupils take part, upon the relation of posture to feeling—posture meaning here, of course, the relations of the various parts of the skeleton to each other as affected by the strains of the striped muscles. Crouch into the smallest possible space and try to feel very bold; work up indignation at the thought of a brute taking candy from a helpless little child, and hold your arms stretched out as far as possible on the sides, hands wide open, and corners of the mouth reaching toward the ears; and so on. Boys and girls find it helpful to understand that “counting ten” does actually help, and how; that we gain control through the voluntary muscles, through doing something, not through inertia; and that the skeletal muscles and the endocrines and the “will” are intimately related.

The increasing utilization of vital statistics by teachers of physiology and hygiene leads readily to the introduction of the significant practical and social aspects of mental and social hygiene. The facts of insanity and their relation on the one hand to specific deteriorations of the nervous system (as in syphilis) and on the other to the subjective conflicts arising from diffusion of purpose, uncertainty as to standards, and laxity of desires connect with the physiology and psychology of sex. The differential birth rates in the community suggest the problems of heredity and eugenics. The differential infant death rates raise important sociological considerations in the control of the sex impulse and in the status of the unmarried mother. The causes of morbidity and characteristic variations in the death rates teach their own lessons.

Although the principles of heredity as they are known to apply to human beings might logically be studied in connection with the facts of maturation and fertilization, it is found helpful in practice to postpone them until after the pupils have a broader conception of what the organism involves. They are now able to conceive physiological variations as well as anatomical ones, mental traits as related to organic structures and processes, and the organism as a developing system of progressive differentiations, rather than as a static and finished machine. They are also now familiar with a great range of details with respect to which heredity and environmental influences have meaning for them. The elements of Mendelian inheritance; the relation of characteristics to the germ plasm; the meaning of the issue as to the transmission of modifications and the present status of the controversy, can be presented briefly. The discussion is sometimes supplemented by the construction of family trees showing the recurrence of trifling or important peculiarities; students always find this concrete study very interesting and stimulating. The implications of responsibility, as was pointed out on p. 32,

must be guarded against the assumption of improving the stock through exercise, or effort or hygienic measures. The responsibility is to uphold the valuable traits, to protect a good stock against pollution by a decadent one, and to establish adequate control over native weaknesses.

Since the practical applications of much of the physiology teaching take a social form—sanitation, control of food supplies, industrial hygiene, protection of women and children, epidemiological control, public clinics, regulation of hospitals, etc., etc.—it is comparatively easy for the teacher who has the social viewpoint to suggest the larger responsibilities of the individual in terms of group need or group advantage. The place of chivalry in life, of sacrifice, of devotion, of all the finer sentiments of the adolescent, can be amply justified in terms of community or racial betterment; whereas the attempt to encourage them in terms of individual gain must inevitably involve equivocation and disingenuous subterfuge which most boys and girls quickly sense. The frank relation of what we feel to be the higher impulses to the common weal meets with a ready response from boys and girls who have learned the principles of race preservation as well as the principles of individual preservation in terms of scientific analysis of cause and effect.

So much of the actual subject matter in the physiological study is identical with that in the biology courses that the teacher of physiology should refer to Chapter IV for further details.

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CHAPTER VII.

PHYSICAL EDUCATION.

1. The aim of physical education.—In spite of the generally accepted implication of the designation “physical,” it is recognized by leading educators that the major purpose of physical education is a social one, namely, that of developing *morale*, rather than of training exhibition or championship athletic teams from selected talent. Physical education is therefore first of all for every boy and every girl, because every boy and every girl needs to be assimilated and socialized. In the second place, physical education must furnish, through suitable activities, an outlet for the normal and legitimate impulses of play, competition, and exhibition which are characteristic of the adolescent. And finally, because these impulses can be guided and directed through our control of the activities, physical education must be made to yield valuable by-products in health, in understanding of individual and communal health problems and resources, and in individual adjustment.

2. Physical education and sex education.—Since the activities through which the impulses find their expression have a direct bearing upon the development and health of the growing personality, any comprehensive plan of education in the high school must take account of various aspects of sex education. The adolescents are at a stage when sex consciousness and problems relating to sex have a close bearing upon their mental and physical activities. The emerging ego asserts itself most strikingly in the desire for attention—favorable, if possible, but attention at any cost. Closely tied to this is an elemental rivalry which takes on a variety of competitive forms. There is the growing interest in the opposite sex, and a gradual orientation of rivalry and exhibition with relation thereto. There is the increasing consciousness of self and of the social and sexual environment, with a corresponding development of curiosities. All of these new stirrings affect the mental and physical habits, sometimes in ways that call for prompt and radical modification. Teachers of physical education have special opportunities for bringing help to young people in this field.

(1) We are rapidly approaching the point where every student in the school comes under the direction of the physical education department.

(2) The organization of the work provides a natural separation of the sexes.

(3) The appeal of competitive group achievement is a powerful force in adjusting the individual's relations to other people.

(4) This is supplemented by the motivation of desire for personal fitness and efficiency, as against the appeal of competitive prowess in some specialized field for which he may show little or no capacity.

(5) The close and informal contacts in athletics, locker rooms, swimming pools, etc., offer the teacher opportunity to learn the trend of the whole group, its problems and attitudes, as well as to discover individuals having special needs, or having desirable or undesirable influence, etc.

(6) The freedom of movement and the informality give opportunities for helpful guidance on casual texts, such as public towels, and drinking cups, toilets, exchange of bedding, clothing, etc.

(7) The physical exercise, games, etc., are under direct control of the instructor.

(8) Much advice can be given in connection with the exercises, or in preparation for them.

(9) The formal or didactic instruction can be linked up directly with the practical floor or field activity.

(10) The physical examination and consultations give opportunity both for discovering needs and giving individual guidance.

(11) Because of the informal and nonscholastic nature of most of the work, the teacher is more favorably placed than are others for getting the confidence of the pupils.

3. The physical education teacher.—Because the task of character formation, so prominent in sex education, involves much more than the mere imparting of information, the character and viewpoint of the physical education teacher are of first importance. In the past the temptation has too often been to secure good athletes or successful coaches for this important position. Because of the disposition of the adolescent to find heroes, to worship and imitate them and because of the strategic advantage in this respect held by the director of physical training, it is essential that the man or woman intrusted with this service be a person of high ideals and fine character, not one who is simply trained to preach high ideals and commend character. On the one hand this teacher must come close enough to the students to insure their full confidence; on the other hand he must have a personality that commands respect. The importance of leadership in this field is strikingly revealed by the variations in the amount of venereal diseases in different units of the Army during the war. There was a close correlation between the character of the officer and the amount of exposure among the

men in his command. These basic considerations can not be compromised by the substitution of high rank in the other qualifications of the teacher—a thorough knowledge of the problem and a thorough mastery of the technique of physical education. The teacher of this subject must further be one who can keep in touch with what the teachers in other departments are trying to accomplish in relation to character and health; he must know enough of the daily and weekly program of the pupils to make the practical work under his direction yield optimal results.

It is apparent that the type of teacher suggested by these requirements has not been supplied by our training institutions in numbers sufficient to meet the needs. But a few men and women of this type are available and their leadership must be used to full capacity for developing the needed personnel.

4. Habit objectives.—As in other branches of education the first objective in physical education is the establishment of correct habits. Attaining health and retaining health require the doing of various things rather than merely wishing or knowing about them. On the side of sex, general health conditions and a suitable routine must be established. General health habits in relation to diet, eating, the use of condiments, drugs, and narcotics, movement of the bowels, sleeping, cleanliness, etc., may perhaps be taken for granted as part of every course concerned with physical health. The same is true of the drill in various kinds of exercises. An effort should be made to extend the routine so as to include matters more specifically related to mental and emotional health; for example, from sufficient sleep to sleep under light covers on a hard mattress; from clothing related to carriage and circulation to clothing loose enough to avoid irritation of the genitals, etc.; from exercise for symmetrical or corrective development of parts to continuous interest in games and sports and hobbies that use the larger muscles or that involve out-door life; from sports and athletics as manifestations of competitive interests, desire for display of prowess, to play and recreational pursuits in regular alternation to “work” as a normal relaxation from stress, and as a source of mental control and self-mastery.

In the educative process the establishment of mental habits can not be separated from the establishment of physical habits. While the boys and girls are learning the movements, the form, and the procedure of various games, they are at the same time learning the spirit of the game, the give and take of good sportsmanship—to hit hard and to take punishment smiling, to win without exultation, and to lose without rancor. Moreover, the experiences in vigorous activity with the group and for the group satisfy normal social cravings and needs and serve as effective means for relieving the sex pressure.

These modes of responding may become habits, through imitation and practice, long before they become formulated rules or conscious ideals of conduct.

5. Ideals.—Just as we no longer expect general training effects from intellectual experience with special material, so we must give up hope of getting general character results from a special set of physical (conduct) or emotional habits. We can not be sure, for example, that the ideal of fair play will always carry over into business or civic relations, unless, in the course of the youth's training, something happens to help extend the concept and the purpose into these fields. This transfer commonly occurs, of course, through the frequent suggestions that teachers of all subjects have occasion to make in a great variety of situations, and in connection with a great many situations studied about or discussed. It is necessary further that this ideal be extended in the life of the pupils to the problems of relation between the sexes. We have abundant evidence that one can be a good sportsman, a fine exponent of fair play in school or college athletics, and then be something quite different in business, or in his attitude toward other social groups—for example, toward women not in his own "set." In the same way the loyalty of high-school boys and girls must expand to realities and ideals beyond the athletic team or the school colors through suggestions, both explicit and implicit, received while feelings of loyalty are dominant or easily aroused. The loyalties and devotions and responsibilities of youth must expand to embrace not merely the community and State and Nation but the human race and future generations.

These attitudes come largely through imitation, through subtle suggestions, often unconscious, through implications in the conduct of teachers and others whom the pupils respect. The teacher of physical education should at least be aware of the ideals it is desired to inculcate, and without preaching aid students in bridging the frequent gap between present fine feeling and remoter implications. These desired results will include first a certain serious, open-minded and respectful attitude toward sex, described sometimes as "scientific." There will be a keen but not too evangelical an appreciation of personal responsibility in various directions—as social, ethical, eugenic, psychical, in relation to other individuals and in relation to the next generation. The teacher needs not merely to know the relation of sex to the higher manifestations of human capacity, but also to have a sincere regard for and appreciation of the value in life of manliness and womanliness, of love and courtship, of marriage and parenthood.

6. Knowledge aims.—Related closely with the practical work, increasing amounts of information and suggestion are being given

by teachers of physical education, even where the responsibility for "hygiene" instruction falls upon other members of the school's faculty. On the side of sex facts and interpretation, teachers of physical education will find occasion to bring to the pupils, among other matters, helpful ideas on the facts of reproduction, on the structure of the organs of their own sex, technical names of parts and functions, personal hygiene of the sex organs, the relation of internal secretions of the gonads to development, the facts of embryonic development, relation between the blood and the embryo, important changes during puberty, the facts of menstruation and seminal emissions, suggestions on conduct toward opposite sex, the facts concerning venereal diseases.

In Appendix C will be found an outline of topics on personal hygiene which can be easily adapted to classes of boys or of girls. If the corresponding subject matter is taught to the pupils in biology or physiology classes, duplication should, of course, be avoided; but the work should be carefully planned to insure the fullest possible correlation between the health instruction of the physical training department and the physiological or biological principles elsewhere presented.

7. Personal problems.—The physical-training teacher is in many schools the one most favorably situated to help boys in the matter of seminal emissions, or the girls in matters related to menstruation, and either in the matter of masturbation.

(1) *Menstruation.*—Both boys and girls should be informed concerning the meaning of menstruation; and the latter, concerning personal habits, bathing, etc., during the period. In spite of exaggerations as to the seriousness of the process on the one hand, and of attempts to belittle it as not deserving notice on the other, menstruation deserves consideration as a normal experience which calls for special care, but not for alarm or for treatment as something akin to sickness. Occasion will have to be found for the treatment of this subject in segregated groups. This can be arranged in a variety of ways. The teacher or the nurse can take the matter up with the girls during a physical training period; the physical training director or the male teacher can speak of it to the boys during the gymnasium period.

(2) *Seminal emissions.*—The subject of seminal emissions as a normal experience should be presented in a similar manner to the boys. There is always danger to the boy that unless he is previously informed, the first experience of this kind will arouse serious alarm and make him a prey to either worry or quacks. The teacher may explain that these discharges represent removal of a surplus product by an automatic process, which need be neither stimulated nor inhibited. The amount and the frequency vary with the individuals

and are influenced by diet, activities, etc. By keeping well occupied, taking sufficient out-door exercise, regulating the diet and the bowels and otherwise living in accord with the principles of hygiene, the boy may avoid worry or concern about these emissions or other sex matters. He should also be warned in this connection of the alarmist literature which is sure to reach every boy, and which is calculated to drive him to consulting a quack. Emissions do not result in lost manhood or imbecility, they do not represent a disease; but if he is in need of expert counsel, he should consult his family physician, and not one of the advertising mountebanks.

(3) "*Sex necessity*."—In connection with these relatively intimate talks, occasion should be taken to dissipate the widely prevalent notion of "sex necessity." Many boys in whom the sex urge is well within control are made to believe sincerely, and against their dominant sentiment, that direct sex experience is necessary for health or for the development of manliness. Others, whose predilections are toward indulgence and unrestraint, find in the doctrine abundant sanction not only for patronizing prostitutes but for seducing girls promiscuously. This means that the young man's avoidance of sex practices must come not as a result of raw repression but as a result of directing the interests and impulses into other channels. For the purposes of the teacher, then, it is necessary to understand that the mere preaching of "don't" brings us nowhere; that the youth must be helped to find absorbing outlets in suitable types of activities. As a matter of instruction, the boy should get two points: (1) The idea that sex indulgence is not necessary for health, and (2) some practical counsel on managing his affairs. There is need of stimulation and suggestion on concentrating all the energies on matters that are worth while and on turning the immediately available energies to the service of the remoter purposes. These things are not completed in a lesson, and, in so far as they are served by the teacher, they come from the latter in his capacity as guide, philosopher, and friend rather than as authority on muscles or circulation. This suggests, too, why sex education is the function of the school as a whole rather than of a particular teacher or department. This problem of self-control is touched upon again on pages 31 and 43.

(4) *Masturbation*.—The subject of masturbation should be considered in connection with the reference to personal habits and applications. There is always here the difficulty of extreme self-consciousness on the part of boys and the danger of extreme exaggeration on the part of the teachers. Some teachers present the matters effectively somewhat as follows:

Many boys get into bad habits of handling their external sex organs. Every boy who has done so knows that is not the right thing to do and is ashamed of himself for doing it. This kind of action, which is called masturbation, is

said by some people to destroy one's manhood. Many people think that is so, because it causes the throwing out of so much of the fluids produced by the special sex organs. It is true that this is a serious physiological waste and that the practice means a serious waste of nervous energy also. But it is chiefly destructive because it breaks down a boy's self-respect, self-confidence, and self-control. The practice tends to make a fellow keep to himself, as if he had to hide a secret from other people; it makes him, therefore, less frank with other fellows and less confident in himself. Knowing that it is something he should not do, and still continuing to do it, he is naturally ashamed of himself and tends to lose respect for himself, the same as he would for another if he saw him constantly doing things he knew he shouldn't. The habit tends to grow on a fellow, so that in time it becomes more difficult to break, and, instead of being his own master, the boy is a slave to this habit, which compels him to neglect his play or his studies, filling his mind with thoughts connected with his secret. In some cases such habits make one so ashamed of himself that he can not look men and girls in the face or enjoy their company. It is in these effects upon his attitude and self-confidence that masturbation injures his manliness, and not in its effect upon the body. Any boy who has erred in this way once, or a few times, should realize that the time to stop is immediately. Instead of worrying about the damage to himself, however, he should make up his mind to use his powers in a sensible, worth-while way. If you go in for sports, work the game for all you are worth. If you go in for music or chess, go to the limit of your ability. Whatever it is that interests you, put into it all you have. Forget any foolish things of the past and think of what kind of a fellow you want to be later. Try to make yourself the kind of man who is good enough for the girl you will want to be your life partner.

Many teachers in different parts of the country have in their possession letters from former pupils testifying to the great help received from instruction along these lines.

8. Methods.—The addition of a few lessons in hygiene to a series of gymnastic or athletic exercises is not all that a thoroughgoing course in physical education contemplates. The exercises are necessary both for general health and for diverting into physical activity the energies that might take unwholesome outlets if left to themselves; and the instruction is necessary for furnishing a rational basis and sanction for the modes of conduct required of the youth. There is, however, need for much more than mass activity and individual guidance in gymnastics. Eventually control, especially in matters pertaining to sex, will depend much more upon ideals and tastes and interests than upon knowledge and physical health, except as physical health means an abundance of energy under control.

The physical education program should include these elements:

(1) *Physical and medical examination.*—On admission to high school and at regular intervals thereafter each student should be carefully examined and the findings recorded for further study and reference. The value of such records both for the individual and for statistical uses is well recognized. Several different forms are in use for the records of physical and medical examination. The

cards should be large enough to permit of remarks or notations of significant items that are not anticipated in the blank, and provision should be made for successive entries over a long period. The card for boys and that for girls will have some items different, and in a mixed school the two forms may well be printed on cards of different color.

The examination should be conducted in absolute privacy, although the physical measurements may be made in the open group. In the course of the examination the director will impress upon the boy or girl the importance of a well-balanced physical development and of sound habits rather than the variations of his physical measurements from the normal.

From time to time through the year occasion will be found to remind the pupil of this examination, which can thus serve to stimulate interest in further improvement. The personal relation which is thus established by the director at the beginning of the course can be made to increase in value continuously.

The most important facts and conditions to be recorded in connection with a physical and medical examination are suggested in the blank form contained in Appendix E.

(2) *Conference*.—After the conference incidental to the first examination there should be others from time to time, varying with individual needs. At these conferences the director will discuss the results of the examination, prescribe individual exercises, suggest modification of habits, and give such personal advice regarding conduct, attitudes, etc., as may seem desirable.

(3) *Consultation*.—In addition to the conference initiated by the director, opportunity should be furnished for consultation upon the pupil's own initiative. Here should come opportunity for clearing up doubts and worries of the individual pupil, for the free discussion of personal problems, for caution or encouragement.

(4) *Physical work*.—At least three periods a week should be devoted to work in the gymnasium or on the athletic field. Each student should have a gymnasium suit or special clothes for this exercise, so that a change of clothing afterwards will be assured. A shower bath followed by a vigorous rub with a coarse towel is essential. The proper use of the showers should be explained at the first meeting.

In some high schools boys who are engaged in various kinds of physical work outside of school are excused from all or part of the athletic activities. In some cases unsupervised free play or long walks are accepted as satisfactory substitutes. No doubt some special arrangements for individual pupils and excuses and exceptions will have to be made for some time to come. Special efforts must be

directed toward getting the public and the educational administrators to accept the activities of the gymnasium and the athletic field as of equal importance with the other school activities.

Although the lack of proper equipment is in many schools the chief obstacle to the introduction of suitable physical education, it is really not necessary to delay a program while awaiting the equipment. A great deal of effective and high grade work has been done in many parts of the country by using vacant lots or even closed-off streets. Gymnasiums, lockers, swimming pools, shower baths, and apparatus are needed; but until they come time and space utilized intelligently under capable directors will accomplish much that is worth while.

The time spent upon the shower bath is often considered unprofitable and there is therefore a temptation to neglect it. In several schools a series of showers graded from warm to cold allows the pupils to walk through in a few minutes and so save a great deal of time.

On the basis of the examination some students will have to be excused from the regular exercises, and in certain cases arrangements will have to be made for specialized exercises of various kinds, suited to individual needs. Selections will further have to be made as to the type of athletics in which each individual is to be encouraged to participate; regulations will have to be formulated and adopted as to membership on teams, rules for training, and so on.

There is a tendency in the most favorably situated schools to place all of the physical exercises in the later part of the afternoon, reserving the other daytime hours for the studies and other school activities and the evenings for the preparations of lessons. From the hygienic viewpoint this would seem to be the best distribution of the pupil's time. This waives, of course, the whole issue of whether it is desirable to continue the practice of home study.

(5) *Instruction.*—Where five periods are prescribed for physical education, two are commonly devoted to instruction in hygiene. Sometimes only one of these is used for class instruction, the other being used for study and consultations or conferences. Most of the instruction is best presented through classroom discussion, with some reading assignments to various textbooks and pamphlets. The relation of the physiological and hygienic principles to daily living should be constantly emphasized.

(6) *Application.*—The final values of physical education are, of course, to be found in the improved habits and attitudes of the pupils. The school itself is concerned in getting the pupils to make practical applications. One check upon this is found in the periodic examination and in the manifest performance of the pupils. Another opportunity is in the organization of social recreational activities in which the physical performance plays a large part. This will include ath-

letic socials and exhibitions, folk dances, social gatherings, and games. Clean entertainment in school under school auspices, as an interesting mode of recreation and pastime, will do much to counteract the pernicious influence of commercialized entertainment. A third form of application is found in giving high-school boys and girls opportunity to direct the games, athletics, and gymnastics of the younger children in the grammar school. Here we learn through teaching, and at the same time acquire a feeling of responsibility which can come only through experiencing responsibility.

(7) *Moral guidance.*—The inspiration of pupils to high ideals is not, as has already been stated, a matter of ritual, to be performed in a standard way at a set time. It emerges in the course of the various interactions between pupils, between groups and between pupil and teacher largely because of the personality and the idealism of the latter. The capacity of the adolescent to sacrifice, to endure, and to exert himself to the utmost when his pride or his loyalties are concerned makes it possible for those directing his games and athletics to appeal to fundamental energies. Group competition and team play are effective instruments in that progressive socialization which on the one hand identifies the boy or girl with an ever larger community of people and interests, and on the other hand makes him or her find sanctions for conduct—and for inhibitions—in broader and remoter considerations. These experiences can thus be made to contribute most vitally not only to character formation in general, but specifically to the formation of those standards of conduct and value that pertain to matters of sex.

There are at the present time, however, certain dangers incidental to athletics, especially for boys, of which the teacher should be aware and which he should endeavor constantly to prevent or counteract. There is the danger of contact with the sporting fraternity and of rubbing off its viewpoint and its scale of values. This is to be met by making the higher standard more attractive rather than by disparaging the former or praising the latter. There is the temptation in overstimulated competitive playing to emphasize winning above playing the game, which occasionally results in resort to foul play. There is the danger of reaction on the breaking of training, particularly if the training has been irksome and more or less arbitrary rather than the mode of living accepted as best or desirable for all time. There is the danger of arrogance and conceit on the part of the popular athlete who distinguishes himself. There is the danger of yielding to herd pressure and standards in the essentially social relations of the whole physical education atmosphere. The temptation is constantly toward the conventional, the accepted, to being "regular"; whereas the end of moral training is to get the individual to attain to a spiritual self-determination that is able, if necessary, to defy the

opinions and codes of the majority. The problem of the teacher is to get the boy or girl to combine consideration and respect for others with confidence in his own principles, to strengthen the pupil's determination to live up to his own ideals, and to direct those ideals into an ascending path. Thus will the glories of the athletic field and the zest of school activities find an enriched and more varied expression in the growing and expanding tasks of adult life.

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CHAPTER VIII.

HOME ECONOMICS.

1. A broader interpretation.—It should be the deliberate intention of those teaching home economics to help girls become in a true sense home makers and not merely house tenders or managers of the material framework and equipment of the home. Since home is the institution upon which society depends for the bearing and rearing of children, girls must learn in connection with the idea of home all that it implies socially and personally. The home-economics courses, in addition to embracing such commonly accepted topics as esthetics or nutrition or budget planning or the technique of household operations, offer a ready and effectual vehicle for the necessary scientific and sociological instruction on the opportunities and obligations of the individual as home maker.

It is likely that an increasing number of married women will come to depend upon standardized commercial service for the preparation of food, for the designing and making of garments, for cleaning, and for disposition of the household routine, but there will still remain distinct functions for the wife and the mother. There will still be needed the creation of a character-forming environment in the home. The essential human relations implied by "home"—between husband and wife, between parents and children—are not going to be delegated or relegated. Home economics must include, then, something more fundamental than feeding and clothing and housing the family.

2. Advantages of these courses for sex education.—The home economics courses afford certain definite advantages for the consideration of sex factors in personal and domestic adjustment. These advantages come chiefly from the method and content of these courses and from the preparation of the teacher in the biological and social sciences in addition to her training in specialized technique.

(1) There is established segregation of the sexes.

(2) The practical and informal laboratory work gives opportunity for more intimate personal relations between teacher and pupils.

(3) The subject matter articulates with the home and gives the teacher an opportunity to learn a great deal about the actual conditions, traditions, and viewpoints of the pupils' homes, and so to offer instruction closely related to definite, concrete problems and needs.

(4) The subject matter itself touches closely upon the controllable factors of physical and mental health, such as ventilation, bathing, cleanliness, proper feeding at various ages and under various conditions, proper clothing, sleep, recreation, entertaining.

(5) The study of dress leads naturally to consideration of the effects upon the feelings produced by color and line, and of various purposes which garment design can be made to serve, and the corresponding responsibilities involved in the selection and designing of dress.

(6) The teacher comes in touch with the social activities of the school under conditions that permit a great deal of useful and effective suggestion regarding costume and conduct.

(7) In connection with home economics the subject of sex becomes linked with the ideas of a happy, well-regulated home.

(8) The study relates the present learning with definite future use and connects ideals and responsibilities with a concrete purpose.

It is recognized that the addition of new subject matter to any course calls for additional time, or compels the elimination of old matter. It is practically impossible to get an increased time allowance; but it is practicable to weed out year by year teaching material that remains only through tradition or inertia, and it is practicable to improve the quality of the teaching so that more is actually accomplished in the time allotted. Effective instruction and guidance in sex matters are actually being given in home economics courses without infringing upon other essentials.

3. A first-year course.—In one high school practical hygiene and home care of the sick have been made a required part of the work of every freshman girl taking home economics. This course developed as a result of the influenza epidemic of 1918, when much needless suffering occurred because nurses were not available.

The course is given by a school nurse to small groups of girls. It extends over a period of six weeks; 90 minutes a day are devoted to the subject during this time. Interest in this course is easily aroused, for the girls realize its practical value and know that the knowledge gained might be immediately utilized in their own homes.

The course opens with an outline of the topics to be studied. The girls are told that they are going to discuss frankly matters which they have not been accustomed to discuss, and they are going to learn many things about the human body which may be new to them, and through which they will come to understand how wonderful the body is. The first talk is intended to prepare the way for what is to come and to prevent any embarrassment which may be felt when the more intimate things of life are considered.

Following the preliminary outline a study of home life and the family is taken up. The house and its furnishings are considered,

and the methods of cleaning, heating, lighting, ventilating, sanitation, and the disposal of sewage and garbage. These topics will be found treated in home-economics courses generally.

Then microorganisms are studied, the conditions under which they grow, how they are transferred from one person to another. This naturally leads to the subject of disease and to the care of the sick in the home. The lessons which follow include bathing, bed making, daily routine of the care of the patient, simple treatments, and other duties of the attendant. Some time is devoted to a talk on disease symptoms and how they may be recognized, in order that the disease may be reported to a doctor in the earliest possible stage. In this connection the various bodily systems are considered, including the reproductive system as well as the circulatory, nervous, respiratory, digestive, excretory, and muscular systems. The physiology of the different organs is briefly reviewed. Common diseases which attack these organs are described, and suggestions are made as to how they may be prevented and cured. In many schools much of the above is taught in other courses, such as physiology or hygiene. While duplication should be avoided, it is well to coordinate the instruction of the various subjects as far as possible.

In some schools practical instruction in principles of hygiene is organized about problems in the care of the child. Babies are actually brought into the school, wherever possible with their mothers. The work is not only vitalized for the girls, but serves to develop further cooperation of the homes.

Before taking up the reproductive system itself, the story of life in some of its more general aspects is told. First, plant life is considered, how the plant grows and how it reproduces. The girls who are taking botany are very anxious to tell what they know of this subject and thus much interest is aroused. A special effort is made to bring out all the points in which there is an analogy to human life, without stressing the resemblances at this time. Then the life of the animal is compared to that of the plant, by telling the life story, including reproduction, of the salmon, the bee, a bird, and a mammal.

It is quite easy now to speak of human life and to compare it with plant and animal life, showing that the ability of human beings to guide their impulses and desires marks their advance far beyond any other animal. The physiology of the female reproductive organs, which is not described in the textbooks used in the schools, is considered in detail. The girls are told how the egg cell, when it is fertilized, becomes an embryo and how this is nourished and protected until it is fully developed. Then just as the chick escapes from the shell, so the placenta separates from the uterus wall and the child begins his existence as a distinct individual.

Before leaving the topic of reproduction an attempt is made to impress upon the girls the importance of so conducting themselves as to insure the best influence upon the thoughts and actions of their boy friends. They are shown how by a modest and dignified behavior and by maintaining high ideals of conduct they not only make for happier and healthier living, but contribute to the character and welfare of those with whom they come in touch.

The success of this teaching is proved by the impersonal interest manifested by the girls, the dignified manner in which they receive these facts, their comments and the questions they ask. One of the nurses tells this incident:

One girl came to me last week and said, "I just love the lesson to-day." I confess I was a little anxious to know what was in her mind, so I asked, "What did you love about the lesson?" She said, "I think it is wonderful about the babies." Then I asked her, "Is this the first time you have heard the story of life?" and she answered, "No, I heard about life, but the way in which I heard it was not nice, and I did not like to think about it; but now I think it is wonderful."

The personal, friendly relations between teacher and pupil which can be so easily established in the teaching of home economics make the girls feel free to come and ask intimate questions that they can not ask at home. The questions asked by the girls, in the classroom as well as after school individually, indicate that their minds are active on the subject and that the instruction serves to overcome many undesirable repressions and distortions acquired early in life.

Since inquiring boys and girls have their minds filled with questions like these, it is felt by school authorities that it is better for the girls to receive clean, helpful information from a suitable source than to get their impressions from ill-informed companions, and that this course, which can be arranged to consume only a small part of the school year, offers a very workable method.

4. A fourth-year course.—Sex instruction has been provided for some years in a course called "home health and home making in an eastern high school for girls." The course is given by the school physician. The subject of sex is approached through a study of the family, the home life, the house and its care. A course on foods and food preparation has already been given earlier in the school curriculum. The course in home health covers the entire school year of 40 weeks, with one period per week. It is required of every girl in the senior class. No textbook is used. An attempt is made to have the meetings very informal by encouraging the girls to give their own opinions and experiences. They are asked to keep notebooks, in which they record a few of the main facts and ideas. About 10 or 15 minutes of each meeting are devoted to a review of the work of the preceding week.

The lessons of the first term include a study of the family and the home, the choice of proper furnishings, methods of cleaning, heating, lighting, sanitary system, disposal of garbage, sewage, etc. The latter subject naturally leads to a lesson in disinfectants, which necessitates a study of germs, infectious diseases, quarantine, etc. This is followed by simple lessons on home nursing. These have proved so successful that now a considerable number are given. They include preparation of the room, qualifications for a nurse, giving of medicines, visitor's behavior, diet and trays, and also practical demonstration on the hot-water bag, ice bag, clinical thermometer, mustard plaster, hot foot bath, surgical dressings, antisepsis, etc. This information was of great use to the pupils during the influenza epidemic. It is found that lessons in nursing are especially valuable in leading up to a consideration of the intimate and often delicate relationship between patient and nurse.

These lessons also necessitate the use of certain anatomical terms such as chest, abdomen, pelvis, genital organs, and breast, and of such medical terms as vomiting, diarrhea, menstruation, laxatives, purgatives, bedpan, and bowel movement. Thus a new vocabulary is introduced and the girls are taught to express certain conditions and symptoms in decent, scientific, and unembarrassing language. A pupil of the class remarked one day, "I never knew anybody could talk so nicely about such disgusting things." It was immediately pointed out that every part of the body has its proper function and that nothing about it need be either disgusting or shameful.

The work of the second term includes the real sex lessons, beginning with a talk on the four periods of human life, that is, infancy, childhood, adolescence, and adulthood. Then follows a special study of adolescence; the changes, both physical and mental, in the girl and boy; reproduction considered entirely from the biological standpoint in fish, batrachians, birds, and mammals; the reproductive organs of the woman, with demonstration of a life-size model; marriage, including the dangers of the secret and runaway marriage; care of the pregnant mother; care of the baby (with model). These lessons include clothing, bathing, feeding (both natural and artificial), and emergencies.

Information on venereal diseases and prostitution is introduced by a general talk on the menace of the three great racial dangers—alcoholism, tuberculosis, and venereal diseases. The pupils have already amassed considerable information on the first two, but their knowledge of the last is hazy and wrapped in mystery, usually incorrect, or nil. They are given scientific facts on gonorrhea and syphilis with the more important effects on the wife, mother, and child. Their feelings are not harrowed by a recital of horrors, but they are simply given enough facts to enable them to realize the grave importance of

marrying a man who is free from both diseases, to make them more careful as to their choice of friends, and to take precautions in public toilets.

Some mention of prostitution is made, especially of those forces which drive girls into this mode of living. The old argument of physical necessity for the man is refuted and a plea made to the girl to help in the solution of this world-wide problem by insisting on the single standard of morality for all, and that standard the woman's.

There follow several talks on immoral tendencies in dress, dancing, the theater, literature, and art. The general behavior of the girl with her boy and men friends is discussed, and her responsibility for their welfare. The boy looks to the girl for his ideals; he goes as far as she allows him to go. It is well for the young girl to realize this, and to try to regulate her behavior accordingly, remembering that, if any wrong is done the blame, whether rightly or wrongly, is always thrown on the woman.

During the first term in the year when the subjects of domestic sanitation and home nursing are being considered, the recitation method is used and each girl is graded for her work. During the second term on sex education, however, there is no regular recitation. Each girl gets a certain credit for having attended, but participation in the discussion, while desirable, is entirely voluntary.

The girls like this course. They are frankly curious, interested, and modest. They are encouraged to ask questions in class or privately. They know that the teacher is willing to answer any questions truthfully; and as a result many interesting ones are asked over a wide range of subjects.

In the 10 years that this course has been given, no objection has ever been raised by a parent of any of the 5,000 or more girls who have taken it. On the contrary, many parents and other relatives have thanked the teacher for giving this information. Teachers have been heretofore too much afraid of the opposition of parents, who prove in most cases glad to have this instruction given. When opposition arises it is because the program is misunderstood. "Sex education" is sometimes interpreted by parents and others not familiar with the best practice to mean a premature, ruthless exposé of the marital relations and a recital of the horrors of syphilis and gonorrhea. When the real nature of the course becomes known, and its constructive value for the careful preparation of the girl for true wifehood and motherhood is realized, parents are usually very grateful. The girls themselves are enthusiastic and thankful. Many come back after graduation to tell how the lessons have helped them.

5. Opportunities for special topics.—Wherever the home economics instruction frankly accepts the challenge implied by Dr. Ellen H. Richards, the founder of the home economics movement, in her question, "Shall we train for future parents?" opportunities for the most difficult topics present themselves. The device of considering problems of child care, whether live babies are brought into the school room or not, furnishes unlimited scope to the resourceful teacher. It makes possible the discussion of most intimate problems in an objective manner, for the attention of the pupil is turned toward a little brother or sister at home, or to some hypothetical child that will need the ministrations of a trained home maker, and away from herself.

By taking the attitude that the girls are preparing to care for young children, the teacher can impart not only "what the young child should learn," but what the pupils before her should have learned years before but did not. Child study, including the care of children from every angle and at every stage, leads consistently to a consideration of the principles of heredity, and the relation between congenital traits and the formation of habits, the resistance to infection, the capacity for achievement, and so on. This leads to a study of the native impulses that determine the basis of our conduct and the methods by which they are modified into habit and character. Here special attention can be given to the enlightenment and guidance the child needs at each period of his development, and to the special difficulties the child has to meet, such as masturbation, and information concerning menstruation and seminal emissions.

The topics of the complete course in home health and home making appear in Appendix D of this manual.

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CHAPTER IX.

THE SOCIAL STUDIES.

1. Public education social.—The aim of all education in the public schools is to promote the common welfare, although it must at many points appeal to the interests of the individual and although it depends for its ultimate effectiveness upon the conduct of individuals. The aim of the social studies in the high school is more specifically that of unifying varied knowledge into a social point of view; the student must be converted into an understanding, active, and purposeful participant in public affairs. The various types of problems that call for public action constitute the essential subject matter of these studies, with some consideration of the factors that must be understood in their solution. Since sex plays such a large part in the development and character of the individual, it vitally concerns the life of society as a whole. The social studies inevitably touch upon sex relations, sex attitudes, sex standards, and the school must do its share in assimilating youth to the highest ideals of the community. This does not mean that teachers of history or civics are to give instruction as to the facts of sex; it means that they must take for granted a certain amount of knowledge of these facts, and deal with their implications in social life and adjustment. The wise teacher injects a large measure of social teaching with respect to sex without ever turning aside from the major topics of which the course is made up, without ever making sex appear too conspicuously as the center of interest, without even embarrassing the frank curiosity of the students. The teaching is largely indirect, but in dealing with certain problems the attack must be direct and unequivocal. On the whole, however, the social studies are concerned with *applications* of biological and psychological facts, with discussions of social good and evil, and directly with standards and ideals of human conduct.

The social studies in the high schools usually range through the four years and include such courses as community civics, vocational civics, European history, industrial history, American history, economics, sociology, modern social problems (which is made up of elements of economics, sociology, and political science). Each of these courses offers opportunities for instruction and suggestion along lines related to sex.

2. Community civics.—This subject is in some high schools simply a new name for the antiquated “civil government”; in others an intermediate stage in which “community” means only the city or the civic community. In more progressive schools it deals with all kinds of problems that arise from the various social relations in which the individual finds himself. Here “community” means any and every group of which the individual is a member and in which he has interests and problems in common with others—the home, the school, the neighborhood, the class, the club, the town, the State, the profession or trade, the Nation, etc. In discussing the common interests and ideals that bind together the members of the community, the home furnishes an excellent problem for analysis and study. The first-year pupils, 14 or 15 years of age, will take part in a discussion of what constitutes a true home, or an efficient home, or a successful home, simply and with great interest. What are the interests, the purposes, the ideals, the governance of such a home? What are the variables that determine its success or failure? An argument may arise as to the identity of the head or “boss” in the home; but this may lead to an appreciation of the value of harmony which results from community of purposes, mutual respect and affection, and cooperation between the heads and the other members of the household. Where the interest holds beyond danger of staleness or flippancy, there is opportunity to discuss the importance of the choice of husband or wife in home building. Even where this is not possible in a mixed class, the joint *discussion of the characteristics of conduct and attitude* that make for successful home building will be worth while.

With this foundation, many of the other problems in the course can find a profitable reference. Housing, as a community problem, must take into account the essentials not merely for suitable lodgings, but for true homes. It is not enough that people be sheltered hygienically; there must be insured conditions that will preserve family life and morals.

Problems of community provisions for recreation can be tied up to the need for social intercourse, for proper meeting of men and women, boys and girls, for play and social recognition under suitable auspices. The need for satisfying activities as preventive of vice and crime will suggest an examination of the criteria of commercialized dance halls, amusement parks, motion pictures, and theaters. In studying various public institutions, such as libraries, museums, schools, concerts, etc., it may be shown how these are extensions of the home, and supplementary to the home. In studying lawmaking, illustrations can be drawn from legislation designed to protect the home, women, and children. The study of dependents, delinquents,

and defectives gives abundant opportunity to touch upon heredity, the importance of early training, the formation of vicious life habits, the irresponsible breeding of incompetents, the problem of illegitimacy, and of the unmarried or abandoned mother, and the sources of insanity in stock, in syphilis, and in perverted habits of living and feeling. All of these topics imply a knowledge of sex facts; but they imply still more eloquently the need for maintaining high standards of sex relations and for exercising individual responsibility in sex matters.

3. Vocational civics.—This subject, related in its origins with the vocational guidance movement, is drifting away from a mere help to finding lucrative occupation, and is concerning itself more and more with fundamental social relations and responsibilities on the economic side. In the tendency to emphasize the ideal of service as the leading criterion of a vocation, rather than profits or prestige, it furnishes an opportunity to link up the various aspects of personal responsibility very effectively. The discussions often involve moral questions, as well as very practical ones. What is the proper dress—or rather, type of dress—for a girl to wear in an office? What about accepting favors, gifts, suppers from men associated in business? How much familiarity may be permitted, or how reticent and aloof must one be? These questions are often of a kind that do not permit of a categorical answer; yet the young people must have guidance in the formation of those attitudes which automatically determine their conduct. What the worker owes is abundantly emphasized—the data are readily available in the magazines and newspapers; what the worker has a right to expect, in the way of physical convenience, hygienic surroundings, personal consideration, needs even more attention than some teachers give, and this often involves the implications of sex. Legislation calculated to protect the worker, especially women workers, is a natural part of the course, and may lead to a discussion of the relation of women's industrial and commercial service to the home, and so raise the point of the purpose of the home, its ideals, and how they may be realized.

4. European history.—All history gives abundant opportunity for discussion of these institutions in which sex plays a fundamental part. The position of woman among the Greeks and Romans is at least mentioned in most textbooks, and the newer textbooks give increasing attention to the daily life and relations of the peoples studied rather than to the picturesque adventures of their masters. A comparison of the status of woman in each of the successive periods studied, with the corresponding effect upon the home and the opportunities of the children, is always a profitable study. The danger must, of course, be avoided in such comparative studies of permitting

students to form the notion that the better or worse is related solely to the status of woman. This is only one of many factors that at any period give character to the culture. How did the high ideal of family life held by the early Romans contribute to the development of their civilization and power? How did the neglect of these ideals in the later days of the empire contribute to its downfall? What were the factors that led to the neglect of these ideals? The ideals of knighthood and chivalry, "the bright flower of the dark period of feudalism," can be studied in mixed classes with good effect, and so also the factors that led to the decay of these ideals and of "noblesse oblige," which became merely a pretext for plunder and exploitation. The study of the rise of Mohammedanism gives occasion for a comparison of polygamy and monogamy, with all that is implied in family life, the opportunity of the individual, the status of women and children. The moral awakening which came with the Puritan movement set high standards of sex life, which had a profound effect upon later development, and in some directions over emphasized asceticism to the point of an austere prudery. In some groups it is possible to show the effect of this reaction upon art, literature, music, and science. We still suffer from the heritage of the mistaken notion that what is pleasant must be wicked, or that there is a virtue in suffering and privation which gives these a peculiar value of their own. The biographies of important or interesting persons afford openings for profitable discussion on the good and evil in the relation of men and women and on the changing standards of conduct brought about on the one hand by changing social conditions and on the other hand by a better understanding of the consequences of our conduct with the advance of knowledge. Facts of heredity as illustrated in certain royal families can be pointed out; and there is often opportunity to discuss the advantages and disadvantages of hereditary political or economic power. These are only a few of the more general instances in which sex education may be advanced through a course in European history.

5. American history.—As in most high schools American history is offered in the third or fourth year, the students are more mature and can consider more seriously certain problems of the types already suggested. They can be stimulated to think about applications of sex relations and individual responsibility (in connection with various problems). The home life of colonial days is a delightful and profitable study from the Puritan household of New England to the patriarchal establishment of the southern plantations. They can consider the influence of slavery upon the peculiar type of chivalry developed, upon the irresponsible breeding of a large population of helpless, subservient, and exploited incompetents, and upon the

place of woman in the community. While European history furnishes more abundant illustrations of the dysgenic effects of war than does American, those of the latter are likely to appeal more vividly to our students. The situations developed by the movement of the frontier across the continent, the segregation of large numbers of men without family life incidental to the opening up of the mines and forests, the hardship of the prairie homes, and so on, contain valuable suggestions toward thinking through what the community and the individual owe each other on the sex side. The biographies of eminent men and women may be profitably utilized. In the recent period the development of legislation may be shown to disclose the community's intention to preserve the home, which has been threatened by many of the results of the industrial revolution.

6. Industrial history.—This study being virtually a consideration of how man has progressively mastered his surroundings, and of how his manner of wresting a living from nature has influenced his mode of living, gives opportunity for showing the relation of various factors to the family. The evolution of the primitive way of life through the patriarchal type of the pastoral stage, the development of commerce, the emergence of woman as chattel and beyond, the effect of the wage system upon home industry, the elimination of economic and other functions from the home, suggest considerations of the "double standard," responsibilities of parenthood, criteria of adequate wage, and other matters connected with sex and other social relations.

7. Social science.—Courses in the elements of social problems are offered in more and more high schools under a variety of names such as "Problems of democracy," "Modern problems," "Social problems." These courses are intended to make explicit some of the important current problems and to unify the earlier courses in civics and economics. Under whatever name these courses afford a most favorable opportunity for coming face to face with social and personal sex problems. The students are usually seniors of 18 or 19 years, and they are on the point of leaving school to deal with the realities of life. In most cases, also, they represent students that are more or less aware of their superior advantages and responsibilities in the community. Finally, they are keenly aware of themselves as male or female, and curious not so much about the bare facts of sex as about the place of sex in social life.

In this course the problem of the modern family should be frankly discussed. The family may be shown as the product of many centuries of evolution, in the course of which the monogamous marriage has come to be the prevailing form. Aside from the empirical support of ages of experimentation, it may be shown as a result of

recent scientific studies that the development of personality, just because it is so closely tied up with the emotions connected with sex, can attain to completer unity in a strict monogamous relation than through a diffused or promiscuous sex interest; that marriage or the married life is itself an education and further development. These considerations will help boys and girls to put a proper valuation upon this fundamental human institution, and will enable them to see in the single standard more than an arbitrary restriction upon what might appear "natural" freedom and spontaneity.

Detailed attention may be given for a short period to the forces tending to disrupt the family—the removal of industry from the home, the increasing independence of women, the distractions of city life, the high cost of housing, the tendency of wages to become the individual income rather than the family income, and so on. And in this connection it is worth while to stimulate thought on the possible development of counteracting factors and of new means for securing the old values. The question of divorce, the reasons for legal and ecclesiastical restrictions, increasing rates as symptoms of the fact that men and women are unprepared for the spiritual or physical demands of married life, and related problems—can well be discussed with these mature students.

The importance of heredity can best be brought out through a discussion of feeble-mindedness and other forms of defective personality. The classic comparisons between the Jukes and the Edwards, and the study of the Kallikak family point to definite conclusions as to standards of conduct, ideals of personality in a mate, and social ideals related to eugenics.

Many teachers deal with prostitution and venereal diseases together, since the former acts as a permanent reservoir of infection for the spread of the latter, and both are frequently considered from the viewpoint of their menace to the family. This treatment presents prostitution as something very remote, and so arouses either no feelings at all or feelings of fear and disgust, not of the system or of the relationship it implies, but of the prostitute, the victim of the institution. There are other aspects, however, which are not only of great importance but of perhaps greater appeal to young people. It is not necessary to sentimentalize about the poor victim, but it is necessary to make clear that prostitution is simply the sex aspect of the assumption that on the one hand it is legitimate to exploit the weak and the helpless for private gain or private purpose of any kind, and on the other hand that everything is legitimate for a price. These assumptions, our boys and girls should see clearly, are akin in their implications to the system of slavery which permitted the use of human beings as instruments for private purposes, and which

is now regarded as out of harmony with the democratic ideals of our civilization. This presentation should arouse the resentment and indignation of youth and the resolve to combat conditions which perpetuate such relationships, not merely the fear of possible injury to themselves.

Prostitution is related to the question of feeble-mindedness in two ways. First, we find that a large proportion of the prostitute population is feeble-minded, which means only that the weak are more easily exploited, more easily tempted, more easily degraded. Second, we find that the promiscuous sex relation, of which prostitution is a commercialized phase, adds disproportionately to the feeble-minded population. The unmarried mother is more likely to be one of the weak girls, and this weak girl, abandoned and betrayed, is more likely to become a prostitute.

Venereal disease can be presented as at present the chief racial menace. Tuberculosis promises to come under control and in this country at least alcoholism has ceased to be a general problem. The facts of importance are those that show the results of these diseases, their relation to illicit sex traffic and their consequent underground and secret diffusion, and their curability when attacked early. The importance of syphilis as the source of so large a proportion of insanity—estimated at between 20 and 30 per cent—should be presented in connection with the fact that many other types of insanity result from unhealthy sex life, even where no venereal infection is present. Various dementias, phobias, and perversions belong here; and there should be at least a passing reference to the well-established fact that in certain cases criminal acts and perversions serve as substitute outlets for unadjusted or misdirected sex impulses.

The teacher of social subjects has a wonderful opportunity for direct and personal appeal to students on the basis of their most highly developed appreciations and their most generous impulses. The more the student is made to feel his individual responsibility to the group, the more valuable will the course be. In one school the presentation of these topics in the social studies was approached by the teachers with considerable doubt and misgiving, but the results have been of increasing value to the students and satisfaction to the authorities each year. The students are more serious and frequently discuss with their friends outside of school the results of the class work, so that the influence of the class is far greater than can be estimated.

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CHAPTER X.

THE ENGLISH COURSE.¹

1. English and literature.—There is a definite tendency to make more and more clear the distinction between the part of the English course that has to do with rhetoric and composition, the structure and technique of language, and the part that has to do with the study of literature, the form, appeal, and content of language as it depicts and expresses human life. In keeping with this tendency is the increasing realization by both teachers and administrators that this department of instruction has through literature a significant contribution to make to the spiritual resources and to the general outlook of the pupils. Literature, divorced from meticulous analysis of construction or figures of speech, becomes preeminently a study of human life and relations, as pictured and interpreted by observers and poets and thinkers.

Thus considered, the department of English has a clear responsibility in any comprehensive school program that acknowledges the existence of sex. Just as physical education seeks to build character through the direction of activities and social responses, just as the instruction in biology deals with sex as a problem of scientific knowledge, and just as the social studies reveal the implications of sex in community needs and ethics, so must the study of literature consider sex in relation to life's ideals. The majority of teachers of English are already doing effective work in holding up to the attention of their pupils high ideals in ethics and esthetics; but by consistently disregarding or evading all references to sex that appear in the masterpieces studied these teachers miss an excellent opportunity to carry their ideals over into practical purpose as standards applicable to the sex side of life.

In fact, the omission of references to sex frequently directs attention to these matters more markedly than would a frank and wholesome discussion of them with practical analysis of the ethics involved. As a class high-school students are keenly inquisitive. They do not fail to sense the significance of the omissions. The result is

¹ Much of the material in this chapter is adapted from a paper read by Miss Lucy S. Curtiss at the Connecticut conference on sex education, Dec. 7, 1918.

that they usually try to reanalyze for themselves the deleted passages or topics and thus miss the wholesome interpretation of the more experienced teacher. Nor do they ordinarily get a satisfactory interpretation elsewhere. The unsettled point therefore becomes an additional source of restlessness in youth.

2. Literature and life.—The irradiation of sex through all of our interests, and especially its importance in all the finer activities of life, make it clear that a little knowledge of the physiology and hygiene of reproduction does not constitute sex education. Literature does not teach these facts of sex, but as a picture of human life it takes these facts for granted, and like life itself is pervaded with allusions to the driving force of sex and to its manifold manifestations. Rightly taught literature explores the broad field of human relationships, it evaluates the ethical aspects of sex, it seeks to unravel the intricate snarls of the threads of life and destiny entangled by the sex impulses, it surrounds the blind gropings and passions with an atmosphere of dignity. The student must come to understand the relation between the crude impulses of his sex nature and the highest possibilities of its utilization; he must understand the social importance of clean sex attitudes and be inspired to acquire them; he must be introduced to the subjective aspects of sex conduct and its consequences. It is through a sympathetic and broad-viewed treatment of literature as an educational medium that the teacher of English can contribute to sex education.

There is here a real danger. As in all teaching that transcends facts and reaches into the realm of interpretation, or, for that matter, as in all relations between teacher and pupils, there is the temptation to dogmatize and to impose personal or sectarian doctrines. In the field of sex ethics, at the present time, this danger is particularly serious because for so large a proportion of our educated classes "morality" has meant repression and negation, or very little more. Yet the great need in our education is to emphasize the positive and constructive side of effort and control.

3. Teaching discrimination.—The most obvious way in which the English teacher can contribute to the proper orientation of sex in life is by the creation or development of a discriminating taste for good literature. This means, of course, not so much the refining of sensibility to style and ornament in writing as the enlightenment of pupils concerning life values, genuineness, and sincerity in writing. It is obvious that under prevailing conditions children will get their ideas and their ideals of sex relationships in one way or another regardless of what the school does. The subtle influence of what is read in books and magazines, richly supplemented by the theater and the movies, may undermine or may build up their characters in relation

to sex ideals, and so may strengthen or poison social life. It is not merely the lurid tales which find their way into many magazines which are the stock in trade of certain popular authors, or which are to be seen frequently on the screens, that must be combated; such frank evils can be more easily guarded against than those whose influence is more subtle. These latter may not consciously affect conduct, but may exert their influence powerfully and steadily through the unconscious. A great part of the fiction found in book and magazine does harm not so much by any particular situation which it describes as by the atmosphere of exaggerated and unreal sentiment which it creates. Such fiction inculcates the feeling that love is a strange miracle, coming as swiftly and mysteriously as Cupid's arrow of classical tradition; that marriage begins a period of perpetual moonlight on a silver sea. This feeling almost universally pervades the late Victorian and even the more recent fiction which is easiest to hand and hence most widely read. It is also very widely diffused through the stories in the more popular magazines, where it often forms the main feature of the plot or furnishes the chief appeal of the story. The easy-going idealism, the lack of moral vigor, the mawkish sentiment appeal to the untrained and uncritical. These stories are read for the flavor of romance by those who are hardly even dabblers in such flavors and who know nothing of the tangs and the zest, combined with the bitters, of real life.

These ideas, harmless as they may seem, inevitably color the attitude of the boy and the girl toward life, and give a false notion of sex relationships to govern future conduct. Affection is not portrayed as the culmination of fit preparation for mating; marriage is shown not as the beginning but as the climax of love; home making as a life process is rarely indicated, while the mutual considerations of a life partnership are hardly mentioned. Marriage is pictured rather as a melting into one than as a clear-eyed walking hand in hand; the give and take, the teasing that molds, the wrestling of opinion that brings mutual understanding and admiration, the service that hurts but considers not, the long look ahead together—all are conspicuously absent.

Yet at no other stage of the child's life can such an effective moral appeal be made. At this time ideals find the soil all prepared for them. But we do not ordinarily give to growing adolescents the nourishment that will allow their ideals to keep pace with growth of body or intelligence. We prescribe hard physical play, vigorous intellectual stimulus, but unconsciously encourage their ideals to sprawl on the easy seats.

To counteract these false ideas and misconceptions or to prevent their formation, the English teacher must bring his students under

the influence of writings in which the keen intuition of the poet and philosopher harmonizes with the objective discoveries of the scientist. Among the classics and among the best modern writers he must find those books that are at the same time of real interest to young people and genuine revelations of the universal in human nature. It is not necessary to avoid sex entirely, or to disregard the legitimate desire of the girl and the boy for romance. Nor can this demand be satisfied by directing pupils to anemic books that lack in vigorous appeal to modern youth. The easy sentimentalism to which so many people resort in a cowardly escape from the difficulties and frustrations of everyday problems becomes exposed after reading seriously one or two of the more vigorous books; and many teachers have found a useful ally in some of the modern satires that exploit the absurdities of this sentimentalism. Stephen Leacock's *Nonsense Novels* are broad enough for the simplest intelligence; Bunner's *The Tenor* and *The Nice People* (both in *Short Sixes*) are humorous and more delicate; and many high-school students can read Shaw's *Arms and the Man* with appreciation.

4. Positive ideals.—The books on the list of required reading in most high schools naturally divide themselves into two classes—those that present ideals of pure and chivalrous love and those that deal with the problems of evil passion. Of the first class, there at once suggest themselves such books as *Ivanhoe*, with its note of Saxon chivalry; the *Lady of the Lake*, in which pure romance is surrounded with poetic beauty; *Lorna Doone*, where the adventures that love undertakes are all instigated by the protecting instinct of a strong and chivalrous manhood; the *Tale of Two Cities*, in which Sidney Carton pays the extreme price of a pure and unselfish love; the love lyrics of Burns and Wordsworth, where universal emotion is expressed in a beautiful and impressive form, which evokes fervor as natural as it is inseparable from the demand for spiritual charm.

In the study of these classics, discussion should include consideration of the affections, the loves and hates, the hopes and fears, which are the very warp of life. Avoidance of discussion upon love leaves the impression with the students that this is perhaps too sacred a subject to be discussed on week days, or that it is too silly to be considered seriously, or that it is something too vile to be acknowledged—the “one great mistake that God had made.” Like the problems raised on other topics, those relating to the affections should be treated in a natural, normal way, with a frankness and sympathy that will bring from the boy or girl an answering flash of reverent appreciation for the love that is pure and strong. For most this treatment will buttress their high ideals; for others the most effective antidote to impurity is a mind filled with clean thoughts.

5. The negative side.—The second class of books commonly read in high schools deals with an impure or unwise love. The same principles of method apply to these. In *Silas Marner*, for instance, Godfrey's early marriage should not be too lightly passed over as perhaps a little difficult to talk about or as likely to lead to misunderstanding on the part of the immature mind. The pupils must be helped to trace clearly from this marriage—a marriage like many a modern one, resulting from intoxication and a momentary infatuation—its inescapable consequences—a woman betrayed, a child deprived of its birthright, a pure, trusting wife deceived, and the author of all this evil brood himself unhappy because of a childless home and a never-ceasing dread of discovery of his early mistake. Without this discussion the inexorable moral law that wrongdoing brings unhappiness and misery may remain obscured. For many pupils, especially those influenced by the light ideals of their everyday reading, the deduction is too easy that because Eppie found a home and redeemed a miser good came out of evil, and that therefore the evil is of slight consequence. The possible slurring over of the evil consequences of sin through such a misinterpretation of this story is unfortunate and may even be dangerous. The ethical motive underlying all great literature, that evil deeds bring suffering and remorse to some one, perhaps to many, must remain unmistakably clear as an important fact of life, not as an author's opinion or as a preachment dragged into an otherwise good story. In this connection may be brought out the point that Godfrey's "moment of weakness" was not a time when the forces of good and evil in his life were equally balanced, to be upset by some trick of fate; but that this "little slip" was the inevitable culmination of the gradual softening of his moral fiber, and that the misery he brought upon others was the result of his attitude toward womankind.

The *Idyls of the King* is another instance. Whatever critics may say about the signs of decadence in Tennyson's poetry, these beautiful poems with their atmosphere of chivalry and purity have an eternal appeal for boys and girls. But they should be taught chiefly for the human interest which they contain and not for meter or figure of speech. Guinevere must never be omitted. The pupils will enter wholesouled into the tragedy of the Lancelot story. Let the teacher read earnestly, interpretatively, Arthur's farewell to Guinevere and they will paint their own picture of Arthur bowed by personal suffering and despair because his great ideal for mankind had been overthrown, of Guinevere wearing out her life in penitence and remorse because of a single sin. Let them hear of Lancelot's wild, passionate quest for the Holy Grail, and they will themselves enter into the bitter experience of a soul that has ren-

dered itself incapable of receiving full spiritual blessing through the sin of yielding to an uncontrolled desire.

Reference may here be made to the "eternal triangle" and why it is used so much in literature and the drama, the inevitableness of sorrow and blasting of ideals which it entails, the false interpretations of it given in many movies. Certain teachers will be able to go further and make applications to society's demands for the monogamic family, the single standard, the eugenically fit.

6. Literary biography.—Other opportunities for the discussion of life problems on the sex side are to be found in the study of literary biographies. These books have the advantage of dealing with actual men and women, instead of fictitious characters. Carlyle's *Essay on Burns*, for instance, contains much that will stimulate thought and discussion among pupils. Without stressing unduly the romantic episodes in the life of the poet, the author establishes a clear distinction between right and wrong, between the wise and the unwise choice. This essay would be valuable if it did nothing but fix in the minds of the pupils the illuminating phrase "The mud bath." It is interesting to note that in some classes the reaction is an unshakable conviction that Carlyle is attempting to justify, or at least to gloss over, the poet's mistakes. Possibly this attitude, even if somewhat unfair to Carlyle and to Burns, is not altogether undesirable provided it is followed up. Someone has said that in youth all is black and white; the mixed grays come into consciousness later. Youth's clearcut and somewhat arbitrary standards of right and wrong must not be confused by age's more subtle balancing of motives and weighing of contributing causes.

If the unpleasant facts are wholly ignored, some boy of superior wisdom will be sure to add the omitted details beyond the classroom door. In discussing Franklin's *Autobiography* a boy made the rather significant statement, "You know the teacher cracked Franklin up as such a wonderful man, but some fellows got hold of a pamphlet that told some other things about his life and then we didn't, any of us, have much use for him." It is much better, by a frank admission of the faults of these men, to awaken in the pupils a realization that, because of their mistakes, they failed to fulfill their utmost possibilities either in production or in influence. This in turn may lead to a searching discussion of whether a person's real contribution to literature or to any creative art can be greater than the character behind the work. And finally, a frank study of biography either through personages in books or through the authors themselves, offers opportunity to consider the variations in social standards and requirements and their causes.

7. English composition.—The written work of the student may be made to contribute to sex education in two ways. Like all activi-

ties that make a demand upon his invention and imagination, the writing of compositions serves as a means of expression, and as an outlet for the creative impulses. In this sense it is a distraction from sex phantasy or preoccupation. But unlike most other activities that are available to the high-school student, the composition, in proportion as it is spontaneous and genuine, reveals to the discerning teacher quite explicitly what ideas and ideals are shaping themselves in the student's mind. In this way the work may enable the teacher to discover the needs and difficulties of the students, and to plan guidance and aid in accordance with the indicated needs. Composition work thus comes to be training in the interpretation of life, and not mere practice in registering the thoughts of others.

8. Supplementary reading.—Through the supplementary reading, which may so easily degenerate into mere routine and drudgery if allowed to do so, there is an opportunity for sex education scarcely second to that of the class discussion. By means of carefully selected lists and through wise direction on the part of the teacher, pupils may be given valuable suggestions more adapted to individuals than the prescribed study books. The better magazines as well as books may be used for this purpose. Occasionally there is traceable a definite result from such suggestions. A boy who had chosen *The Scarlet Letter* from the junior fiction list came, when the report was due, and said that his was not ready. He had read the book but wanted to read it again before reporting. He did read it again, and parts of it three times; then he said he considered it the greatest book he had ever read. Similarly, another boy came with some question about his written report, also on *The Scarlet Letter*. After discussing the technical point involved, he asked, "What do you think about the man in that book, anyway?" The teacher, as teachers will, counterquestioned, "What do you think?" The boy hesitated a moment, then said: "Well, I am not exactly sure, but I think he is a kind of coward." This boy, too, said that he wanted to read the book again.

After this experience, the question is not whether this book, because of its problem, should find a place on our reading list, but whether it should not be used more than it is. Not every pupil is equally impressed with it, of course; but if some boys draw of their own accord the conclusion that the man who will leave a woman to bear all the shame of guilt in which he has been at least an equal partner is a coward, it has accomplished a worth-while purpose and may do the same, or more, for other boys. *Adam Bede* is another book in which this subject is treated, also by a master hand, though there is frequent need of a teacher's suggestion to drive home the implications of the story.

There is further the question whether in the reading list for the last years of high school there should not be included novels which present the problem of social evil from a distinctly modern viewpoint. Such books as *The Awakening of Helena Ritchie* and *The Iron Woman*, by Margaret Deland, and *The Bent Twig*, by Dorothy Canfield, are wholesome reading and may be recommended in many cases. The more frequently the pupils can be introduced into the society of those high-minded authors who are not mere money-making scribblers but real interpreters of life, the greater will be their power to resist evil suggestions.

Through the variety of viewpoints presented by the literature studied, through the sympathy and objectivity of the teacher's own attitude, through the creative outlet and self-revelation afforded by the writing of themes, and through the high level maintained in the discussion of human feelings and motives and aspirations, the classes in English dealing with literature and with the life it seeks to depict and interpret can help young people to a far better understanding of the vital problems and to a better adjustment of their own ideals and purposes in the field of sex.

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APPENDIX A.

EMERGENCY DEVICES.

Until more scientific and satisfactory methods can be developed there are available a number of special devices of considerable importance. These are of temporary value and will be employed only so long as the lack of qualified teachers and other conditions make it impossible to reach all students through regular classes and other group activities.

1. The special lecture.—An inquiry on the status of sex education in the high schools of the United States shows that a large proportion of the schools which are now providing sex education resort to the special lecture. Some person who is prepared to give such a lecture, a public health official, a physician, an experienced social worker, is invited to give a special talk to the boys or to the girls. The sexes are always segregated, and, as a rule, a special time is set, since it is desired to bring several classes or sections together. One lecture for each group is ordinarily deemed sufficient. Several State boards of health have adopted this method and regularly send out lecturers, who thus reach large numbers of students.

This method has some weaknesses. In the school, it gives an undue emphasis to the occasion, and is likely to stir up a flurry of excitement among the pupils in anticipation of something very much out of the ordinary. The personal equation is of the utmost importance; the person who can present the subject of sex to high-school students in a single lecture appropriately and adequately is very rare indeed. Therefore, the utmost care must be exercised in the choice of a lecturer. Moreover, we must realize that time is of the very essence of a normal adjustment to sex facts and sex feelings and that a single lecture—or even a series of lectures—does not allow the students to adopt a normal attitude to the situation. The very consideration of the subject for a lecture period establishes a feeling of discomfort that interferes seriously with effective thinking, and such positive impressions as are made do not have time to be assimilated. At best the lecture method is a temporary expedient and however useful should not be permitted to hinder the development of more systematic work.

2. Pamphlets.—A number of pamphlets, carefully prepared to meet the needs of special age and sex groups, are now available through State boards of health and the United States Public Health Service. These are being extensively used all over the country. While they have a disadvantage in common with the lecture of presenting to the pupils a consideration of sex as a subject by itself, they have the advantage that they can be read without embarrassment arising from the presence of others and, further, that they can be used at a time to suit the convenience or mood of the student and in a tempo that suits his rate of absorption, so to speak, or they can be reread until fully comprehended.

The initial disadvantage, however, assuming that the contents of the pamphlets is suitable, can be largely overcome by the method followed in their distribution. In some schools the pamphlets are given to the boys or girls to keep, with the suggestion that the pamphlets are for their personal use. In one school the pamphlet is mailed to the boy at his home, after the parents have been in-

formed of its coming and have been given an opportunity to raise objections. It is hoped in this way to avoid the unfortunate results of uncontrolled discussion. Many teachers prefer to distribute the pamphlets for reading in the classroom, to be returned at the close of the period. For this method the advantage is claimed that it insures careful study of the pamphlet and prevents it getting into the hands of those for whom it is not suited. It has the serious disadvantage, however, of making the individual pupil extremely self-conscious, reading embarrassing matter in the presence of others whom he knows to be a large part of the effect will depend upon the spirit in which it has been brought to the attention of the pupils in school.

3. The exhibit.—The Keeping-Fit Exhibit has been widely used in high schools and elsewhere for several years, and many hundreds of thousands of boys and young men have been, apparently, favorably as well as deeply impressed by it. The exhibit consists of 48 placards, containing pictures, diagrams, and letterpress, designed to stimulate interest in sound health and to suggest activities and attitudes of help to that end. While the exhibit deals with general physical and mental health, there are introduced at several points suggestions bearing on sex, its meaning and control, and on ideals of fair play and responsibility in relation to sex, parenthood, etc. A similar exhibit, "Youth and Life," is now available for girls and young women, and another one for negro boys and young men.¹

The exhibit is shown without comment, the students passing before the cards, each student taking usually all the time he needs in front of each card. It is well to have present some one who can answer questions and help direct individuals to further sources of information and guidance. It is recommended that the showing of the cards be repeated after an interval, or that copies of the Keeping Fit pamphlet be distributed when the exhibit is shown to boys, and the pamphlet *Healthy, Happy Womenhood*, when it is shown to girls. In this way impressions may be strengthened and the subject given further study at convenient times.

A recent investigation of groups to whom the exhibit had been shown indicated that the boys profited much from it. "If everyone who saw the keeping fit exhibit and read the pamphlet received as much help as I did," wrote one of them, "the exhibit accomplished its purpose nobly." This exhibit is also available in the form of lantern slides.

4. Motion pictures.—An interesting supplementary agency for sex education is the use of motion-picture films. Two suitable films are now available, *How Life Begins* and *The Gift of Life*. These have particular value in connection with biology or physiology courses, but may be used independently as a means of presenting the essential facts of reproduction. They are both very effective when shown to high-school pupils.

Both of these films show, by essentially similar methods, the evolution of sexual reproduction from the lowest forms to the mammals. In *The Gift of Life* the last reel presents the essential facts of development in the human species, by means of animated diagrams, and includes also more detailed information on fertilization than is given in the other film. In many States the Department of Health has arranged to lend these films to the schools.

A third film, consisting of 12 reels, has been prepared under the direction of the Surgeon General of the Public Health Service. This deals with the basic physiological facts of nutrition and reproduction as well as with the application of biological principles to the prevention of communicable diseases, and

¹ These exhibits were prepared by the U. S. Public Health Service; inquiries should be addressed to the Service or to State Boards of Health.

to maintaining health. The development of reproduction is presented in relation to general organic processes, and the venereal diseases are taught as special phases of parasitism and its prevention.

As in other fields of education, these motion pictures are of greatest value when used to supplement lecture, laboratory, and recitation, rather than as a substitute.

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APPENDIX B.

SUGGESTED OUTLINE OF A SUMMER SCHOOL COURSE FOR TEACHERS, ON SEX INSTRUCTION AND GUIDANCE FOR HIGH SCHOOL PUPILS.

I. INTRODUCTION.

A. The significance of sex education.

1. Its protective value.

Bigelow. A Sex Education, Chapter II.

Addams. A New Conscience and an Ancient Evil, Chapter IV.

Moll. The Sexual Life of the Child, pages 280-306.

British National Birthrate Commission. Problems of Parenthood and Population, pages cvlix-clviii.

2. Its value for greater self-realization.

Galloway. Biology of Sex, Chapter VII.

Galloway. The Sex Factor in Human Life, Chapter X.

3. The place of sex in life.

Galloway. The Sex Factor in Human Life, Chapter II.

White. Mental Hygiene of Childhood.

Galloway. Sex and Life, Lecture I.

B. The need for sex education.

1. Social and personal problems relating to sex.

Bigelow. Sex Education, Chapters I and II.

Ellis. Studies in the Psychology of Sex, Volume VI, Chapter II.

Exner. The Rational Sex Life for Men, Chapter III.

Ellis. The Task of Social Hygiene, Chapters I and VIII.

Gallichan. A Textbook of Sex Education, Part IV, Chapter I.

2. Recognition of need.

(a) What high-school students say.

Peabody. Sex Education in Home and High School,
A. S. H. A. Bulletin No. 221A.

Gruenberg. What Girls Want to Know, School
Review, December, 1918.

(b) What college students say.

Exner. Problems and Principles of Sex Education.

Galloway. Biology of Sex, pages 11-16.

(c) The war.

Ellis. Essays in War Time, Chapters X and XI.

(d) Changing attitude of parents.

Johnston. High School Education, Chapter XX.

C. The place of sex education.

1. A point of view—sex an integral part of life.

2. Education with respect to sex a continuous process.

3. Its correct proportions and relations.

Galloway. Biology of Sex, Chapter II.

Bigelow. Sex Education, Chapter X.

Wile. Sex Education, Introduction and pages 123-124.

II. THE BIOLOGICAL ASPECTS OF SEX.

- A. Reproduction as one of the basic life processes.
 - Child. Senescence and Rejuvenescence, Chapter XIII.
 - Galloway. Biology of Sex, Chapters IV and V.
 - Morgan. Heredity and Sex, Chapter I.
- B. Reproduction in various forms of living things.
 - 1. Ameba, yeast, paramecium, flower, fish, frog, bird, and mammal.
 - Coulter. Evolution of Sex in Plants.
 - Geddes and Thomson. Sex, Chapters II-VI.
 - Geddes and Thomson. Evolution of Sex, Chapters XI-XV.
 - Child. Senescence and Rejuvenescence, Chapter XIV.
 - East and Jones. Inbreeding and Outbreeding, Chapters II and III.
 - Morgan. Heredity and Sex, Chapter II.
- C. Survey of embryogeny.
 - Hegner. Germ Cell Cycle, Chapter I.
 - Conklin. Heredity and Environment in the Development of Man, Chapter I.
 - Davenport. Principles of Breeding, Chapter VII and pages 336-344.
 - Kellicott. General Embryology, Chapters I and II.
 - Coulter. Evolution, Heredity, and Eugenics, Chapters 14 and 15.

III. PHYSIOLOGY AND HYGIENE OF THE REPRODUCTIVE FUNCTION.

- A. The reproductive system—Double function of sex glands.
 - 1. Gonad.
 - Child. Senescence and rejuvenescence, Chapter XIV.
 - Bell. Sex Complex, Part I.
 - Morgan. Heredity and Sex, Chapter VII.
 - Patten. Grand Strategy of Evolution, Chapter VI.
 - Parker. Biology and Social Problems, Chapters II and III.
 - 2. Endocrine.
 - Cannon. The Bodily Changes in Fear, Hunger, and Pain.
 - Voronoff. Life, Chapters III-V.
 - Morgan. Heredity and Sex, Chapter V.
 - Crile. Man—An Adaptive Mechanism, Chapter X.
 - Parker. Biology and Social Problems, Chapter II.
- B. Physical and mental changes in puberty and adolescence related to maturing sex organs.
 - Blanchard. The Adolescent Girl, Chapters II and III.
 - Moll. The Sexual Life of the Child, Chapters III and VII.
 - Hall. Youth, Chapters II and XI.
 - Slaughter. The Adolescent.
 - Starr. The Adolescent Period, Chapter I.
 - Inglis. Principles of Secondary Education, Chapters I-III.
- C. Hygiene of adolescence.
 - Hall. Youth, Chapters II-VI.
 - Starr. The Adolescent Period, Chapters I-V.
 - O'Shea. Trend of the Teens, Chapters I-IV.
 - Monroe. Principles of Secondary Education, Chapter VII.

IV. PSYCHOLOGICAL ASPECTS OF SEX.

A. Direction of new impulses.

Blanchard. The Adolescent Girl, Chapter IV.

White. Mental Hygiene of Childhood, Chapters I, II, V, VI, and VIII.

Hall. Adolescence, Volume II, Chapters X-XII.

Hall. Youth, Chapters IX, XI.

Putnam. Human Motives, Chapter V.

Forbush. Government of Adolescent Young People.

B. Satisfaction of new interests.

Woodworth. Dynamic Psychology, Chapters VII and VIII.

Groves. Moral Sanitation.

White. Mental Hygiene of Childhood, pp. 27-32, 57-63, Chapters V and VIII.

Exner. The Rational Sex Life for Men, Chapter VI.

Ellis. The Task of Social Hygiene, Chapter VII.

Galloway. The Sex Factor in Human Life, Chapter XI.

Johnston. High School Education, Chapter XVIII.

V. SOCIOLOGICAL ASPECTS OF SEX.

A. The family.

1. Antiquity and evolution.

Howard. History of Matrimonial Institutions, Chapters 1-IV.
Goodsell. Family as a Social and Educational Institution,
Chapters II-VI.

Lowie. Primitive Society, Chapters I, II, III, and VIII.

2. Monogamic ideal.

Lowie. Primitive Society, Chapters IV and V.

Cooper. Human Welfare and the Monogamous Ideal. American Social Hygiene Association Bulletin No. 314.

Goodsell. Family as a Social and Educational Institution, pages 498-499, 505-506, 521-523.

Howard. Family and Marriage, Section IV.

Knight, Peters, Blanchard. Taboo and Genetics, Part II.

3. Importance for individual and society.

Goodsell. Family as a Social and Educational Institution, Chapter XIII.

Thomas. Sex and Society, Chapters II-VI.

4. Obstacles and dangers to the family.

(a) Ignorance and lack of training.

Addams. A New Conscience and an Ancient Evil, Chapter IV.

Goodsell. Family as a Social and Educational Institution, Chapter XIII.

Addams. The Spirit of Youth and the City Streets, Chapter II.

(b) Prostitution.

Flexner. Prostitution in Europe, Chapters I-VI, XI.

Addams. A New Conscience and an Ancient Evil, Chapters I and II.

Ellis. Essays in War-Time, Chapters IX and X.

A. The family—Continued.

4. Obstacles and dangers to the family—Continued.

(c) Venereal diseases.

Stokes. The Third Great Plague.

Stokes. To-day's World Problem in Disease Prevention.

Creighton—Social Disease and How to fight It.

(d) Economic factors.

Addams. A New Conscience and an Ancient Evil, Chapter III.

Howard. Family and Marriage, Section XXV.

Bebel. Woman and Socialism, Chapters X and XII.

B. Outlets for sex impulses on high social levels.

1. Intellectual and artistic efflorescence.

Galloway. The Sex Factor in Human Life, Chapter IV.

Scott. Sex and Art.

Healy. Mental Conflicts and Misconduct, Chapters III and IV.

2. Service and leadership as sex substitutes.

Holmes. Principles of Character Making, Chapter X.

Galloway. The Sex Factor in Human Life, Chapter IV.

Woodworth. Dynamic Psychology, Chapter VII.

C. Public and Personal Health Problems.

1. Mental hygiene an object of education.

White. Mechanism of Character Formation.

White. Principles of Mental Hygiene, Chapters II and III.

2. Maladjustments with sex basis.

Wells. Mental Adjustments, Chapters IV–VI.

White. Psychiatry, Chapter XI.

Healy. The Individual Delinquent, Chapters XI and XXIV.

Healy. Mental Conflicts and Misconduct, Chapters X and XI.

3. Quacks.

Stokes. The Third Great Plague, pages 140 and 174.

Hall. Adolescence, Volume I, pages 460, 461.

Ellis. Sex in relation to Society, pages 60, 61.

D. Eugenics.

1. Study of particular families.

(a) Kallikak, Jukes, Edwards, Adams, etc.

Goddard. Kallikak Family.

Rogers and Merrill. Dwellers in the Vale of Siddem.

Estabrook. The Jukes in 1915.

Winship. Jukes-Edwards.

Popenoe and Johnson. Applied Eugenics, pages 161, 162.

2. Elementary principles of heredity applied to man.

Castle. Genetics and Eugenics, Chapters XXIV–XXVII.

Walter. Genetics, Chapters XI and XII.

Guyer. Being Well Born, Chapters IV and VII.

Galloway. The Sex Factor in Human Life, Chapter IX.

East and Jones. Inbreeding and Outbreeding, Chapters IV and XII.

Tower. Modification of Germinal Constitution, Chapter VII of Castle's Heredity and Eugenics.

Conklin. Heredity and Environment in the Development of Men, Chapters II–V.

D. Eugenics—Continued.

3. Interrelation of eugenics and current social movements.

British National Birth-Rate Commission—Problems of Parenthood and Population, pages clviii-clx and Chapter IV.

Ellis. *Essays in War Time*, Chapters XIV-XVIII.

Kellicott. *The Social Direction of Human Evolution*, pages 116-123.

East and Jones. *Inbreeding and Outbreeding*, Chapter XIII.

Ward. *Eugenics, Euthenics, and Eudemics*. *American Journal of Sociology*, May, 1913.

4. Influence of eugenic ideals upon conduct.

Holmes. *Principles of Character Making*, Chapters III and IV.

Guyer. *Being Well Born*, Chapter X.

Thomson. *Heredity*, Chapter XIV.

Davenport. *Heredity in Relation to Eugenics*, Chapter VIII.

Popenoe and Johnson. *Applied Eugenics*, Chapters XVIII and XX.

Holmes. *First Law of Character Making*. In *Eugenics, Twelve University Lectures*.

Thorndike. *Eugenics with Reference to Intellect and Character*. In *Eugenics, Twelve University Lectures*.

VI. METHODS OF SEX EDUCATION.

A. Parents' lack of preparation; inhibitions.

Wile. *Sex Education*.

B. Grammar grades and high schools.

The Problem of Sex Education in Schools, United States Public Health Service Bulletin No. 7, pages 11-16.

C. All sex education in high school should be an integral part of existing courses in the school curriculum, in connection with:

1. Biology.

Gruenberg. *The Biology Teacher and Sex Education*, *School Science, and Mathematics*, February, 1922.

2. General science.

The Place of Sex Education in Biology and General Science, United States Public Health Service, V. D. Bulletin No. 41, pages 3-13.

3. Physiology and hygiene.

A High School Course in Physiology in Which the Facts of Sex are Taught, United States Public Health Service, V. D. Bulletin No. 50, pages 3-12.

Rapeer. *Essentials of Educational Hygiene*, Chapters XX and XXI.

Gallichan. *Textbook of Sex Education*, Part II, Chapter VI.

4. Home making.

5. Agriculture.

6. Social science.

7. English, or others.

Sex Instruction through English Literature, A. S. H. A. Bulletin No. 309.

8. Club work within the school.

Gallichan. *A Textbook of Sex Education*, Part III, Chapter IV.

D. Qualifications of the teacher.

Ellis. *The Task of Social Hygiene*, pages 250, 251.

Bigelow. *Sex Education*, Chapter IV.

United States Public Health Service, V. D. Bulletin No. 41, pages 13-15.

Gallichan. *Textbook of Sex Education*, Part II, Chapter I.

E. Special problems.

1. Segregated and nonsegregated classes.
2. Community support and cooperation with parents.
3. The small school.
4. Outside lectures.
5. Books and pamphlets—school and city library, and home.
6. How much to tell?

Wile. *Sex Education*.

United States Public Health Service, V. D. Bulletin No. 38.

Gallichan. *A Textbook of Sex Education*, Part II, Chapters
III-V.

Galloway. *The Father and his Boy*.

APPENDIX C.

OUTLINE OF TOPICS ON PERSONAL HYGIENE.

- I. The value of health.
 - The meaning of health.
 - Strength to achieve; appearance to impress.
 - The ideal of the efficient life, not merely "strenuous."
 - Health for service and for the enjoyment of life.
 - Endurance and vitality as health problems.
- II. The human machine.
 - Its intricacy.
 - The delicacy of its adjustments.
 - Its structure.
 - The cells; kinds, structure, metabolism, reproduction.
 - Tissues.
 - Organs.
 - Systems of organs; skeletal, muscular, digestive, respiratory, circulatory, nervous, reproductive.
- III. Exercise, the physiology of exercise.
 - Exercise for various purposes, e. g., for symmetry, correctional, posture, correlation of movements, etc.
 - Moderation and excess in exercise.
 - Time and place.
 - The bath.
- IV. Rest.
 - The physiology of fatigue.
 - Elimination.
 - Recuperation.
 - Amount of rest needed.
 - Reserve strength.
 - Vacations.
 - Sleeping; time, conditions, etc.
- V. Air.
 - Composition.
 - Humidity.
 - Temperature.
 - Movement.
 - Dust, inorganic and organic, including bacteria, etc.
 - Ventilation—home.
 - Sleeping room.
 - Public buildings.
 - Workshop, offices, etc.
 - Drafts.
 - Air and exercise.
 - Respiration.
 - Care of nose and throat.
 - Effects of tobacco.
 - Breathing habits.

VI. Clothing.

Hygienic needs, changes in temperature, relation to perspiration.
Wet clothing and wet feet.
Clothing for various conditions.
Clothing for various purposes.

VII. Water.

Relation to physiological processes.
Amounts needed.
When to drink.
Sources of supply; in city, in country, on hikes, etc.

VIII. Food.

Uses of constituents; proteins, carbohydrates, fats, vitamins, minerals.
Esthetics of eating related to health.
Choice of foods.
Eating habits.
Digestion, its meaning and effects.
 Functions of the various organs.
 Care of teeth.
 Regularity of bowels.
Mental states and digestion.

IX. Interdependence of organs and of functions.

Effect of activities on composition of blood.
Effect of composition of blood on heart beat.
Effect of exercise on breathing.
Effect of emotion on various processes.
Internal secretions.
 Their sources.
 Their effects.
 Their over, or under, production.
Effect of internal secretions upon development.
The integrity of a healthy body.

X. How the mind controls the body.

Automatic reactions.
Spinal cord and its reflexes.
The brain and its modification of reflexes.
Relation of feelings to physiological processes.
Relation of thinking to feeling.
 Control of cheerfulness, worry, confidence, etc.
 Relation of posture to feelings; control of mental attitude through control of bodily attitude and activities.
 Effect of sex thoughts on sex feelings and organs.
 Self-control.
Mental hygiene.
Seminal emissions
Menstruation.

XI. Communicable diseases.

How micro-organisms interfere with health.
How diseases are communicated.
The prevention of infections.
The nature, cure, and prevention of important communicable diseases.
 Typhoid.
 Tuberculosis.

XI. Communicable diseases—Continued.

The nature, cure, etc.—Continued.

Gonorrhea.

Malaria.

Yellow fever.

Syphilis.

Patent medicines, medical charlatans.

Cults and pathies.

XII. How the race perpetuates itself.

Reproduction of cells.

Formation of many-celled body from a single cell.

Origin of the single cell from two gametes.

Fertilization in flower, fish, mammals, including man.

XIII. Heredity.

Individual variation.

Inherent.

Acquired.

Mendel's laws.

Continuity of germ plasm.

Preserving human values in future generations.

XIV. Public health.

City, State, and national health service.

Health not altogether an individual matter; depends upon cooperation of citizens.

Responsibilities of the individual.

XV. Living long and living well.

APPENDIX D.

OUTLINE OF TOPICS ON DOMESTIC SANITATION, HOME NURSING, AND SEX EDUCATION.¹

First term, 20 weeks, one period of 45 minutes.

1. The family, its value, civic, economic, moral; functions of.
2. The home, hygienic furnishings.
3. Hygiene of the kitchen, cellar, bathroom, bedroom.
4. Heating and lighting.
5. Disposal of garbage and sewage; flies, etc.
6. Germs, classification of, germs as a cause of disease, infections, body defense.
7. Infectious diseases, early signs, incubation period.
8. Bureau of health, duties, quarantine, etc.
9. Disinfectants, practical use in the home.
10. Bichloride, carbolic acid, formalin, chloride of lime.
11. Home nursing; value of hospital, preparation of room.
12. The nurse; dress, shoes, recreation, care of, etc.
13. Night nursing, food between meals, trays.
14. Diets; liquid, soft, light.
15. Behavior in sick room, visitors, presents, etc.
16. Rules for giving medicines.
17. Practical demonstrations; hot-water bottle, ice cap, thermometer.
18. Hot foot bath, mustard plaster, hot fomentations, turpentine stupes.
19. Surgical dressings; absorbent cotton, gauze, adhesive plaster.
20. Asepsis, bandaging, demonstrations.

The topics of the second term are as follows:

1. Four periods of human life: Infancy, childhood, adolescence, adult life.
2. Adolescence, the girl: Physical changes (structural, functional); mental changes (emotions, affection, imagination, craving for excitement, sex instinct, religion).
3. Adolescence, the boy: Physical changes (see above); mental changes (see above).
4. Reproduction: Fish and frog (lower forms of life).
5. Reproduction: Bird and mammal.
6. Reproduction: Human being; prolongation of infancy.
7. Reproductive organs: Female; demonstration on model.
8. Marriage: History; engagement; basis of marriage (essentials).
9. The pregnant mother: Care; hygiene.
10. The baby: How to handle; clothes.
11. The baby: Bathing; sleep and rest.
12. The baby: Feeding (natural, artificial); emergencies.
13. The racial poisons: Alcoholism, tuberculosis, venereal diseases.

¹ By Florence H. Richards, William Penn High School, Philadelphia, Pa.

14. Venereal diseases; gonorrhea and syphilis: Effect on wife and child; heredity, racial problems, eugenics.

15. Prostitution: History; connection with venereal disease; solution of problem.

16. Immoral tendencies: Dress, decent and indecent, explanations; dancing, decent and indecent, explanations.

17. Immoral tendencies: General behavior; literature, movies, theater, art exhibits.

PHYSICAL EXAMINATION RECORD.

Name.....	Age.....	Date of birth.....
Date of examination.....	Physiological age	{Prepubescent..... {Pubescent..... {Postpubescent.....
Height.....	Weight.....	Lung capacity.....
History of— Measles.....	Pneumonia.....	Diphtheria.....
Grippe.....	Tonsillitis.....	Wh. Cough.....
Date of last successful vaccination.....	Date of last visit to dentist.....	Scarlet Fever.....
School year.....		Operations.....
Date.....		

	Exami- nation.	Treat- ment	Exami- nation.	Treat- ment.	Exami- nation.	Treat- ment.	Exami- nation.	Treat- ment.
		Reexam- ination.		Reexam- ination.		Reexam- ination.		Reexam- ination.
Remediable defects:								
Vision with glasses.....								
Vision without glasses....								
Hearing.....								
Teeth.....								
Nasal breathing.....								
Hypertrophied tonsils...								
Nutrition.....								
Speech.....								
Hernia.....								
Varicocele.....								
Possibly remediable defects:								
Cardiac disease.....								
Pulmonary defects.....								
Orthopedic defects.....								
Nervous disease.....								
Heart disease.....								
Skin disease.....								

Remarks.....
Inspector or nurse.....

CODE.

Examination.	Grading of nutrition.
<p>✓= Defect. S= Eye strain.</p>	<p>1= Excellent 3= Fair. 2= Good 4= Poor.</p>
Kind of treatment.	Results on reexamination.
<p>G= Glasses. O= Operation. D= Dentist. P= Private physician. M= Medical. I= Institution. R= Refused treatment.</p>	<p>O. K.= Corrected or cured. + = Improved. - = Unimproved.</p>

The physical and medical examination record should be supplemented by the following form:

School year.....				
Date.....				
Sleep:				
How many hours?.....				
How many windows in room?.....				
How many windows open? How wide?.....				
How many sleep in same room (bed)?.....				
Cleanliness:				
How often do you bathe?.....				
What kind of bath?.....				
Are teeth clean?.....				
Condition of nails (biting)?.....				
Condition of hair.....				
Condition of clothing.....				
Food:				
What do you generally eat at—				
Breakfast.....				
Lunch.....				
Dinner.....				
Do you masticate food thoroughly?.....				
Stimulants:				
Do you smoke? How much?.....				
Do you use coffee? How much?.....				
Do you use tea? How much?.....				
Bodily exercise:				
What games do you play?.....				
Other exercises (gymnastics).....				
Hours of work—				
Gainful.....				
At home.....				
Posture—				
Habitual.....				
On command.....				
Bodily functions:				
Bowel movement regular?.....				
Symptoms of illness or disorder?.....				
Menstruation—				
Age established.....				
Irregular? Painful?.....				
Home conditions:				
Language spoken.....				
Facilities for study (quiet room).....				
Remarks:				

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1. *Sex Education*. Maurice A. Bigelow. A study of the entire field of sex education. New York: Macmillan, 1916.
2. *Problems and Principles of Sex Education*. M. J. Exner. Statements from 948 college men with reference to their sex education, the problems thus raised, and principles of procedure indicated. New York: Association Press, 1915.

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1. *The Biology of Sex*. T. W. Galloway. In addition to the fundamental biological facts, this book includes material on need and suggestions as to method. New York: Heath, 1915.
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5. *For Girls and Mothers of Girls*. Mary C. Hood. A straightforward book, presenting the facts of life in simple language. Can be used by girls themselves. New York: Bobbs-Merrill, 1914.

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